

SUPERIOR COURT OF THE STATE OF CALIFORNIA  
FOR THE COUNTY OF LOS ANGELES

BETTY BULLOCK,

Plaintiff,

-VS-

No. BC 249171

PHILIP MORRIS INCORPORATED, a )  
corporation; DUPAR'S RESTAURANT, )  
a corporation; ROBINSON'S MAY, a )  
corporation; HILTON HOTELS )  
CORPORATION; STEVEN'S STEAK AND )  
SEAFOOD HOUSE, a corporation; )  
and DOES 4-100, inclusive, )

Defendants.

DEPOSITION OF LAURENTIUS MARAIS, PH.D.,  
on behalf of the Plaintiff, at  
5 Wilshire Boulevard, Suite 1170,  
Angeles, California, at 9:30 A.M.,  
ay, May 22, 2002, before FRANCES M.  
ITY, Certified Shorthand Reporter

22 No. 8934 of the State of California,  
23 pursuant to Notice.  
24  
25

1

CAROLAMPKIN COURT REPORTERS

1 APPEARANCES  
2  
3  
4 For the Plaintiff:  
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6 BY: MICHAEL J. PIUZE, Esq.  
7 11755 Wilshire Boulevard  
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9  
10 For the Defendant Philip Morris Incorporated:  
ARNOLD & PORTER  
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CAROLAMPKIN COURT REPORTERS

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I N D E X

WITNESS: Laurentius Marais, Ph.D.

EXAMINATION BY  
Mr. Piuze

PAGE  
4

E X H I B I T S  
DESCRIPTION

PLAINTIFF'S

PAGE

16	1 - C.V. Of Laurentius Marais, Ph.D.	19
17	2 - Invoices from William E. Wecker Associates	19
18	3 - Index of Articles and Articles reviewed	98
19	4 - Computer printouts	99
20	5 - Risk attributions and risk analyses	103
21	6 - Index for Exhibits 4 and 5	108

22  
23  
24  
25

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# CAROLAMPKIN COURT REPORTERS

1 LOS ANGELES, CALIFORNIA  
2 FRIDAY, MAY 22, 2002  
3 9:30 A.M.  
4  
5 LAURENTIUS MARAIS, PH.D.,  
6 called as a witness on behalf of Plaintiff, having  
7 been first duly sworn, was examined and testified as  
8 follows:  
9

## 10 EXAMINATION

11  
12 BY MR. PIUZE:

13 Q Good morning. Tell me your name, please.  
14 A Laurentius Marais.  
15 Q What's your occupation?

16           A     I am a statistician and applied mathematician  
17     in a consulting practice.  
18           Q     Whose consulting practice?  
19           A     In the practice of a firm named  
20     William E. Wecker Associates.  
21           Q     Where is that?  
22           A     It's in Novato, California.  
23           Q     I've heard of that.  
24                 How long have you been affiliated with them?  
25           A     It's over ten years.

4

CAROLAMPKIN COURT REPORTERS

1           Q     And what is your title up there?  
2           A     Vice President and Principal Consultant.  
3           Q     Do you have a C.V. with you?  
4           A     I do.  
5           MS. WILLIAMS: That's part of the package.  
6           THE WITNESS: Actually, I have produced a C.V. to  
7     counsel. I misspoke. I don't have a copy of it.  
8           MS. WILLIAMS: Actually, we have a Fed Ex package  
9     that will arrive here shortly that will have exhibits, plus  
10    a most recent copy of his C.V., but we have plenty of  
11    exhibits to play with until that time, although it's also  
12    available at wecker.com.  
13          THE WITNESS: That's correct.  
14    BY MR. PIUZE:  
15          Q     Is that how we go about doing things. I can

16 hire you and talk to some of the other people that do it  
17 that way.  
18 Didn't you send a C.V. with the expert  
19 designation? Don't you, usually?  
20 MS. WILLIAMS: I don't think we did.  
21 BY MR. PIUZE:  
22 Q When were you hired for this case?  
23 A Approximately January this year.  
24 Q Okay. What were you told was your mission?  
25 MS. WILLIAMS: Objection; vague.

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1 THE WITNESS: Interpreting what was I asked to do, I  
2 was asked whether I was in a position to testify about the  
3 Surgeon General's estimates of smoking attributable deaths  
4 and subsequent revisions. That one in particular. And  
5 also whether, if called upon, I can answer questions about  
6 the implications of the Surgeon General's report on smoking  
7 cessation for the circumstances of a person like the  
8 plaintiff in this case.  
9 BY MR. PIUZE:  
10 Q What Surgeon General reports on cessation is  
11 there for a person like the plaintiff in this case?  
12 A The Surgeon General's report that I was asked  
13 whether I was in a position to interpret is the report of  
14 1990 on smoking cessation.  
15 Q What does it say?

16 MS. WILLIAMS: Objection; vague. Overbroad.  
17 THE WITNESS: It is an extensive document that says  
18 a large number of things, all of them pertaining, in some  
19 way, to the topic of smoking cessation.  
20 BY MR. PIUZE:  
21 Q There must be some statistic in there, I'm  
22 guessing, or no one would ask you to get involved.  
23 A There are calculations reported in that  
24 report.  
25 Q What are the calculations in that report? What

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CAROLAMPKIN COURT REPORTERS

1 statistic did the Surgeon General say in 1990 about smoking  
2 cessation, statistically speaking?  
3 MS. WILLIAMS: Objection; vague.  
4 THE WITNESS: Again, the Surgeon General said -- I  
5 understand the Surgeon General's report contains a number  
6 of statistic tabulations of various kinds. It's not  
7 possible to summarize them in a brief answer to your  
8 question, but there are certain of these that pertain to  
9 the effect on, or the pattern of relative risk of various  
10 kinds of smoking associated outcomes as they vary as a  
11 function of different durations of cessation.  
12 Q Got it. So if someone like Betty Bullock had  
13 stopped around 1990, what would her odds be of getting  
14 sick? Is that one of the things you looked at?  
15 A That was the general sense of the question, as

16 I understand it, or the assignment.  
17 Q Lucky guess on my part.  
18 What's the answer? What were her odds of  
19 getting sick if she had stopped in 1990?  
20 A Uh, I'll -- I will assume for purposes of your  
21 question you mean getting sick with lung cancer, which I  
22 understand is Ms. Bullock's kind of sickness, and there are  
23 tabulations in the report that I have, if I could refer to  
24 that, that indicate that had she quit smoking, say, in  
25 1966, and thereby placed herself in the category of

7

CAROLAMPKIN COURT REPORTERS

1 long-duration quitters, than by 2001 her relative risk of  
2 lung cancer would have been -- would be dramatically lower  
3 than that of people in the category who continued to smoke  
4 throughout that period.  
5 Q How much lower?  
6 A Uh, by a large percentage margin. I haven't  
7 calculated the precise percent, but I believe with the  
8 numbers available, something along the order of  
9 80 percent.  
10 (Brief recess.)  
11 BY MR. PIUZE:  
12 Q I can go to the Surgeon General report in 1990  
13 to look up to see what the Surgeon General said on this  
14 issue.  
15 How did you get involved in interpreting it,



16 modifying it or other --  
17 MS. WILLIAMS: Objection; vague.  
18 THE WITNESS: In the way that I have already  
19 described. I'm a statistician. I know how such  
20 calculations were done, and I was asked whether I was able,  
21 or whether I was in a position to interpret those numbers.  
22 BY MR. PIUZE:  
23 Q You started out and have continued to basically  
24 paraphrase my questions to you.  
25 As of January, are you in a position? In

8

CAROLAMPKIN COURT REPORTERS

1 January were you in a position?  
2 A Yes.  
3 Q Had you worked on this kind of case before,  
4 involving the Surgeon General's report?  
5 MS. WILLIAMS: Objection; vague.  
6 THE WITNESS: I've worked on this kind of case,  
7 meaning a lung cancer or personal injury case involving  
8 tobacco, yes.  
9 BY MR. PIUZE:  
10 Q What cases have you worked on?  
11 MS. WILLIAMS: Objection to the extent you're asking  
12 about cases in which he has not been disclosed as an  
13 expert.  
14 MR. PIUZE: That's a good point.  
15 Q Our rules of the road are that if you're

16 consulting with someone and haven't been designated yet,  
17 that's called attorney work product and I don't deserve to  
18 know the name of the case, nor do I want to know the name  
19 of the case. However, I'm entitled to know those cases  
20 exist, without identifying them.

21 Let's start with the cases you've been  
22 identified as an expert. Have there been any?

23 A Yes.

24 Q Wrightly?

25 A I don't believe so.

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CAROLAMPKIN COURT REPORTERS

1 Q Hemley?

2 A Yes.

3 Q Daniels?

4 A No.

5 Q Lucier?

6 A No.

7 Q Okay. What other cases have you been  
8 designated in?

9 A Uh, ones that come to mind are a case called  
10 Nunally.

11 Q Where?

12 A I don't recall the venue.

13 Q California?

14 A I don't recall the venue.

15 Q Okay.

16 A There was a case called Montgomery.  
17 Q Do you recall the venue there?  
18 A I believe -- I associate that one with  
19 Washington, D.C., but I'm not -- I'm not exactly sure. The  
20 issues that I deal with in these cases have to do with  
21 certain statistical calculations, so I don't ordinarily pay  
22 close attention to where precisely the case has been  
23 filed. There is also one I mentioned, Gardener -- did I  
24 mention Gardener? Montgomery. I believe there is a case  
25 called Creaton. Did I mention that?

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CAROLAMPKIN COURT REPORTERS

1 Q No.  
2 A And I'm sure there are some others that don't  
3 come to mind right now, a handful of others. And if any of  
4 the names come to mind I will certainly speak up and  
5 volunteer it.  
6 Q So far, without my counting, I'd say you've  
7 named either five or six cases, but I could be off.  
8 How many cases, total, do you think that you've  
9 been involved in for tobacco?  
10 A I've been named, I would think -- and, again, I  
11 don't have -- I don't carry a catalog in my mind, but I  
12 think the range of 10 to 15 cases would be a reasonable  
13 estimate.  
14 Q Where you've been named as an expert?  
15 A Yes.

16 Q How many cases are there where you were hired  
17 as a consultant, but not named as an expert?  
18 A Another handful. Perhaps five.  
19 Q So we're talking a total, thus far, of 15 to 20  
20 cases?  
21 A Understanding that that is a rough estimate and  
22 not obviously a precise number, yes, that's a fair range.  
23 Q Are they all cases involving individual smokers  
24 as plaintiffs?  
25 A No, they are not. The ones that I have named

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1 are, but one other name came to mind, which is not.  
2 Q What is that?  
3 MS. WILLIAMS: Objection. Same as before. To the  
4 extent that he's been disclosed as a witness in that case.  
5 MR. PIUZE: Right.  
6 THE WITNESS: That case is called Imperial Tobacco  
7 of Canada vs. the Attorney General of British Columbia.  
8 BY MR. PIUZE:  
9 Q What is that all about?  
10 A That is a constitutional challenge to an act of  
11 the British Columbia legislature pertaining to damages and  
12 health care costs associated with smoking.  
13 Q What have you been asked to do?  
14 A I've been asked to opine on statistical aspects  
15 of calculating damages, or the cost of health care

16 attributable to smoking.  
17 Q When were you asked to do that?  
18 A In the vicinity of three or four months ago.  
19 Q Have you done work on this case yet?  
20 A I have.  
21 Q Have you filed any kind of a report yet?  
22 A I have.  
23 Q With whom?  
24 A Literally, I forwarded the report to counsel.  
25 And you'll understand that I don't know the logistics of

12

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1 what specifically happened from thereon.  
2 Q Let me explain where I'm going here on this  
3 area of questioning.  
4 In the United States here, for certain kinds of  
5 cases, including something called United States of America  
6 vs. whoever in the tobacco industry, all of the experts  
7 designated in that case for the United States had to  
8 actually file reports that were filed with the court. And,  
9 of course, once they're filed with the court it's fair  
10 game. It's open season. That's how I was using the term.  
11 For some reason I'm thinking the rules are the same up  
12 there. The expert files a report that goes to the court.  
13 Do you know if that's the case?  
14 A I don't know one way or the other.  
15 Q Do you know if your report was filed with the

16 court?  
17 A I don't know one way or the other.  
18 Q Is that the only case involving smoking-related  
19 entities in which you've been hired to discuss statistics  
20 involving health care costs?  
21 A It's the only case in which I've been  
22 identified and designated as an expert to discuss health  
23 care costs, correct.  
24 Q Are there other cases where you've been hired  
25 for the same reason, but you haven't been designated yet?

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CAROLAMPKIN COURT REPORTERS

1 A There are other cases where the subject matter  
2 is obviately related.  
3 Q Aside from discussing health care costs in a  
4 non-individual smoker case, and aside from discussing  
5 statistics having to do with this case, what do your  
6 statistics have to do with life expectancy risks?  
7 How would you characterize it?  
8 MS. WILLIAMS: Objection.  
9 THE WITNESS: Risks and, more specifically,  
10 attributable risks.  
11 BY MR. PIUZE:  
12 Q Aside from doing statistical analyses in health  
13 care areas in non-individual smokers' cases, and doing  
14 statistical analyses of attributable risks in individual  
15 smoker cases, have you been asked by the tobacco-related

16 entities, through their attorneys, to do any other kind of  
17 statistical analyses in regard to tobacco litigation?  
18 A I'm thinking. Nothing comes to mind as I sit  
19 here, and if I pause for just a moment -- let me -- nothing  
20 comes to mind that fits under those headings.  
21 Q Okay. Have you testified in court yet on any  
22 cigarette case or tobacco case?  
23 A I have not.  
24 Q Have you testified in a deposition yet?  
25 A Yes.

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CAROLAMPKIN COURT REPORTERS

1 Q Tell me the ones where you think you gave  
2 depositions?  
3 A I gave a deposition in the Hemley case.  
4 Q Okay.  
5 A And that's the only one that -- I believe that  
6 is the only one, period.  
7 Q And they didn't call you at trial, though?  
8 A No.  
9 Q They should have?  
10 A They didn't, but -- and I can't speak to what  
11 they should have done.  
12 Q The lawyer asked the jury for 15 and the jury  
13 gave 50. Sounds like they should have done something,  
14 don't you think?  
15 MS. WILLIAMS: Objection.

16 THE WITNESS: 50 is a larger number than 15, I  
17 agree.  
18 BY MR. PIUZE:  
19 Q Maybe they should have appointed Mr. O'Mire  
20 Grand Buba before they tried that case, huh?  
21 A That would be outside my area.  
22 Q Do you know who O'Mire is?  
23 A The name is familiar. I'm not sure whether he  
24 is an attorney or an official of the company.  
25 Q Nor did anyone else.

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CAROLAMPKIN COURT REPORTERS

1 But, anyway, wherever you are Mr. O'Mire, good  
2 morning, because he'll read this.  
3 Do you have any idea, statistically speaking,  
4 how many people in the tobacco industry read these  
5 depositions?  
6 MS. WILLIAMS: Objection; irrelevant.  
7 Argumentative.  
8 THE WITNESS: I do not.  
9 BY MR. PIUZE:  
10 Q How much do you charge per hour for your  
11 consulting work?  
12 A I'm a salaried employee of my firm, and my firm  
13 charges \$475 an hour for my time.  
14 Q In all matters in which you participate?  
15 A In all of the professional hours that I devote



16 to consulting projects.  
17 Q So whether litigation or non-litigation, 475  
18 bucks an hour?  
19 A Yes.  
20 Q Whether it's tobacco or tin cans or  
21 environmental problems, it's 475 bucks an hour?  
22 A I presume if I worked on subjects like that.  
23 It is 475 on all the projects that I do work on.  
24 Q Fine. Is your hourly the highest in the  
25 company?

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CAROLAMPKIN COURT REPORTERS

1 A No.  
2 Q Why not?  
3 A Because there are higher -- there is a higher  
4 hourly in the company.  
5 Q Who makes that, more per hour than you?  
6 MS. WILLIAMS: Objection. Calls for speculation.  
7 THE WITNESS: Uh, I'm not able to answer the  
8 question in a form in which you pose it, but I can mention,  
9 perhaps helpfully, that that person is the president of the  
10 company.  
11 BY MR. PIUZE:  
12 Q I had already guessed that part.  
13 How much have you billed on this case?  
14 A Uh, the best way for me to give you an  
15 accurate answer as to what my firm has billed, is to

16 actually give you some copies of invoices which I have  
17 brought with me.  
18 (Counsel handing Mr. Piuze documents.)  
19 MR. PIUZE: Thank you.  
20 So is this it?  
21 MS. WILLIAMS: I will let him answer that.  
22 BY MR. PIUZE:  
23 Q Are these them?  
24 A These are the invoices covering the period of  
25 December through February. I checked yesterday with the

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CAROLAMPKIN COURT REPORTERS

1 front office to find out why they ended in February, and I  
2 learned that very recently, after those copies were made,  
3 we sent out an invoice -- the firm sent out an invoice  
4 covering the period March and April. I do not have a copy  
5 of those invoices in the file that I've handed you, but I  
6 know the number on it, and if you wish, I can arrange to  
7 have it faxed to your office right now in the course of the  
8 deposition.  
9 Q What's the number?  
10 A 500. Approximately \$500.  
11 Q So looking at all these things, it looks like  
12 it's under 10,000 bucks.  
13 Does that sound about right?  
14 A I can't disagree with that, but I didn't look  
15 at the numbers.

16 Q Here, take a look.  
17 (Witness examining documents.)  
18 THE WITNESS: That seems right.  
19 BY MR. PIUZE:  
20 Q Okay. Let's make the bills Exhibit 2, the  
21 about to arrive C.V. will be Exhibit 1.  
22 I would like you to make the call during the  
23 deposition and we'll slide in the new bills as part of  
24 Exhibit 2.  
25 ///

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1 (Plaintiff's Exhibits 1 and 2 were marked  
2 for identification by the Certified Shorthand  
3 Reporter and retained by counsel.)  
4 BY MR. PIUZE:  
5 Q And I'd like to ask you, who is  
6 John Monica, Sr., please?  
7 A I'm just making a note on calling for the  
8 invoice.  
9 John Monica, Sr. is -- I understand to be an  
10 attorney with the firm of Shook, Hardy & Bacon.  
11 Q And how is it that you understand him to be  
12 that?  
13 A He introduced himself to me as that.  
14 Q When?  
15 A Approximately December. I believe it was

16       sometime in December of last year, 2001. It may have been  
17       November, but thereabouts. Very late last year.  
18       Q       Okay. Why don't you tell me how that all  
19       happened? Cold call?  
20       A       Uh, Mr. Monica called me and set up an  
21       appointment to discuss statistical issues related to the  
22       Surgeon General's calculations to which I had received  
23       previously.  
24       Q       For this case?  
25       A       It may have been, although I'm not sure that

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CAROLAMPKIN COURT REPORTERS

1       this case -- that he mentioned this case, or that I knew  
2       the name of this case at the time.  
3       Q       How many times have you talked to Mr. Monica,  
4       ever?  
5       A       I would estimate at least three, and no more  
6       than half a dozen. Maybe six occasions. I can try and  
7       actually think of every single occasion if you need a  
8       precise number, but it's in that ballpark.  
9       Q       Fine. Whether it's three or six or someplace  
10       in between those two numbers, it's occurred within the last  
11       five months?  
12       A       Correct, or three or six. Someplace in  
13       between, or maybe seven, or maybe if I really strain I  
14       could remember eight occasions. But it's a number in that  
15       ballpark and it's in the last few months.

16 Q Where have the meetings occurred, or the  
17 conversations -- let's say conversations? Where did the  
18 conversations occur?  
19 A Well, the conversation I referred to in my  
20 previous answer was a telephone conversation, and I don't  
21 remember specifically whether I was in my office when I  
22 took his call or not. But it was a telephone  
23 conversation. And it is likely that I was at my office. I  
24 don't remember that with precision.  
25 Q Have all the conversations been telephone

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CAROLAMPKIN COURT REPORTERS

1 conversations?  
2 A No.  
3 Q How many have not been?  
4 A Three come to mind.  
5 Q Where did those conversations occur?  
6 A One of them, the first of the three that I am  
7 thinking of, occurred at the office of Shook, Hardy & Bacon  
8 in San Francisco.  
9 Q And Monica was there?  
10 A He was there.  
11 Q Who else was part of that conversation?  
12 A There was another employee of Shook, Hardy  
13 there. I believe his last name is Thompson.  
14 Q Okay.  
15 A And Ms. Williams was there.

16 Q When was that?  
17 A That was -- I believe it was in December of  
18 last year.  
19 Q Okay. And what did the four of you discuss?  
20 A The -- we discussed the Surgeon General's  
21 calculations as reported in portions of the reports of 1989  
22 and 1990, and as I recall we discussed epidemiological  
23 issues having to do with the calculations of relative risks  
24 and attributable risks and technical aspects of those  
25 calculations, and the inferences that one could make about

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CAROLAMPKIN COURT REPORTERS

1 possibilities of causation and how those would be related  
2 mathematically, or statistically to the concept of relative  
3 risk. It was a wide ranging conversation around the  
4 subjects that I've just mentioned.  
5 Q You had some knowledge about those issues  
6 because of your past involvement in other cases?  
7 A I have some knowledge about the issues because  
8 of my training and background as a statistician and applied  
9 mathematician.  
10 Q Did you have knowledge about these issues  
11 because of your involvement in other cases?  
12 A Uh, every time I encountered these issues, or  
13 often when I encounter these issues I refresh my knowledge  
14 or encounter some new aspects or think of a new way of  
15 thinking about or explaining something, and so certainly

16 encountering these issues is part of the training and  
17 background process that I described, but in that sense the  
18 answer to your question is yes, my involvement in these  
19 issues and my experience in them stems in part with my  
20 involvement with other cases.

21 Q How long did the four of you talk that day?

22 A On the order of one and a half hours, maybe a  
23 little less than that, maybe a little longer than that.

24 Q Well, you're saying that was in December?

25 A That's what I recall.

22

CAROLAMPKIN COURT REPORTERS

1 Q Okay. Let's see if we have anything here for  
2 December. It looks like you had two and three-quarters in  
3 for December. How long does it take to drive from that  
4 spot to downtown, more than a half hour, isn't it?

5 A It takes maybe 45 or 50 minutes.

6 Q Well, assuming you were on the road, just to  
7 make this easy, for an hour and a half, that leaves 1.3  
8 hours for the meeting.

9 Does that sound right?

10 A On your assumption, yes, I would agree that 2.8  
11 minus 1.5 would be 1.3.

12 Q That's not assumption. That's the sun rises in  
13 the east. I guess as an assumption, that means you  
14 wouldn't have billed December's events until January or  
15 later?

16           A     No, barring some very special circumstances  
17     that I can't think of I would expect December hours would  
18     be on the December invoice.  
19           Q     Okay. So after that -- by the way, had you  
20     ever met Thompson before?  
21           A     No.  
22           Q     Ms. Williams?  
23           A     No.  
24           Q     And after that conversation occurred, what did  
25     you set about to do?

23

CAROLAMPKIN COURT REPORTERS

1           A     Let me -- I would, just before I respond to  
2     your question, I'd like to go back to a previous answer  
3     which was brought to mind by your mention of Thompson, it  
4     may be that the initial call was not from Mr. Monica at  
5     all, but from Thompson. In fact, I'm not sure, but it  
6     occurs as a possibility when you mentioned -- when you  
7     mentioned his name.  
8           Q     Okay.  
9           A     I did not, as I recall, set out to do anything  
10    in particular from that meeting. It was an informational  
11    meeting, and I left. And I would have to -- I don't  
12    specifically remember where I went or what I set out to do  
13    from there. I don't remember any assignment flowing from  
14    the meeting.  
15           Q     Did they tell you you were hired?



16 A I don't recall learning that the firm or me had  
17 been retained at that meeting.  
18 Q Have you ever learned that?  
19 A I have learned that at -- although I don't  
20 recall a specific occasion, I have a vague recollection  
21 that there was a follow-up telephone call in which I was  
22 told that.  
23 Q Okay. Who is Hoff?  
24 A He is an employee of Wecker Associates.  
25 Q What is his title?

24

CAROLAMPKIN COURT REPORTERS

1 A Vice President and Principal Consultant.  
2 Q And what has he done here on this case?  
3 A Uh, he has reviewed issues on points that I  
4 wanted to discuss with a colleague.  
5 Q Who's Taves, T-a-v-e-s?  
6 A Karen Taves is an employee of  
7 Wecker Associates.  
8 Q And what is her title?  
9 A I'm not sure. It's something like a project  
10 manager or senior project manager. It's an expression of  
11 that type.  
12 Q What's her educational background?  
13 A Uh, Master's Degree in some countative field  
14 having to do with applied mathematics.  
15 Q What issues was it that Hoff was researching

16 for you? If researching is the wrong term, let me know and  
17 I will use a better term.  
18 A Researching is the wrong term. I would have --  
19 I do not have a specific recollection of the particular  
20 conversation or event that caused him to be on the time  
21 sheet, but it would have involved discussion or review of  
22 aspects of the Surgeon General's calculations.  
23 Q Okay. Had he ever done that?  
24 MS. WILLIAMS: Objection; vague.  
25 THE WITNESS: I've discussed these issues with him

25

CAROLAMPKIN COURT REPORTERS

1 off and on over a period of some years, so he is familiar  
2 with the same set of issues.  
3 BY MR. PIUZE:  
4 Q Are you the only person in the firm to whom the  
5 tobacco industry comes for statistical analyses in  
6 litigation cases?  
7 MS. WILLIAMS: Objection. Calls for speculation.  
8 THE WITNESS: Others in the firm have been  
9 retained.  
10 BY MR. PIUZE:  
11 Q Excuse me?  
12 A At least one other person in the firm has been  
13 retained.  
14 Q Who's that?  
15 A That would be the president of the firm,

16 Bill Wecker.  
17 Q Who came first as far as to the company's  
18 concerned, Wecker or you?  
19 A Certainly Wecker. I believe there was some  
20 retentions or some -- there was some contact, I understand,  
21 before I joined the firm.  
22 Q What year did you join the firm?  
23 A At the end of 1991, beginning of 1992.  
24 Q And there was no tobacco work for you until  
25 what year?

26

CAROLAMPKIN COURT REPORTERS

1 A I don't recall that with precision. In any  
2 event, I understand when you say no tobacco work for me,  
3 you're talking about retentions for statistical work by an  
4 entity or firm in the industry. The Hemley case is the  
5 first one in which I provided testimony, and I believe that  
6 case was in 1998 and I simply don't recall with precision  
7 what may have happened before that.  
8 Q Remember what I said about the sun rises in the  
9 east?  
10 A I recall your using that expression.  
11 Q From the same kind of absolute certainty bases  
12 I can tell you you didn't work on the Hemley case before  
13 '98, because there wasn't a Hemley case before '98,  
14 because it was illegal to sue the tobacco companies before  
15 '98.

16 Did you know that?  
17 A I didn't know that.  
18 Q Okay. And if you want to check on any of that  
19 you can ask Ms. Williams on the way out. I'm sure she'll  
20 verify it all.  
21 What had you done for the tobacco industry, if  
22 anything, prior to 1998?  
23 A I had some involvement with statistical  
24 consulting for clients who I understood to be from the  
25 industry, but I was not designated or disclosed in any such

27

CAROLAMPKIN COURT REPORTERS

1 matter.  
2 Q While you were at this firm in Novato?  
3 A Yes.  
4 Q Well, starting when would that be?  
5 A At some point before 1998 and after 1992.  
6 Closer to 1992 than 1998. It could even be about '92.  
7 Q What is it that you were doing? I don't want  
8 the name of the case, but what were you doing?  
9 MS. WILLIAMS: Objection. I think that goes beyond  
10 the boundaries that we set for attorney/client privilege  
11 and work product.  
12 MR. PIUZE: Really?  
13 MS. WILLIAMS: You just asked what he was doing.  
14 Let's not get into the substance of the case.  
15 MR. PIUZE: If I don't ask him about the name of the

16 case, how is he disclosing anything?  
17 MS. WILLIAMS: Well, if he's telling you what he's  
18 doing, then you're revealing the substance of the work  
19 product with the attorneys.  
20 MR. PIUZE: The work product for what?  
21 MS. WILLIAMS: For whatever cases he's talking  
22 about.  
23 MR. PIUZE: In 1992, with the statute of limitations  
24 like it was?  
25 MS. WILLIAMS: In California. You don't know that

28

CAROLAMPKIN COURT REPORTERS

1 he was doing a California case, do you?  
2 BY MR. PIUZE:  
3 Q Well, was it a California case?  
4 A I don't know.  
5 Q Was it an individual smoker case?  
6 A I don't even -- I don't know that either, and  
7 I -- let me explain, just to be helpful and move us along  
8 here.  
9 We're a consulting firm and I talk about  
10 technical issues and points of calculation with colleagues  
11 all the time on matters where I do not necessarily know who  
12 the ultimate client is or even what the scope of the  
13 engagement is.  
14 Q That wouldn't surprise me a bit. But you knew  
15 it involved tobacco, right?

16 A Yes.  
17 Q Prior to '98 did you do any consulting in  
18 regard to tobacco that was non-litigation related?  
19 A I do not know the answer to that. It is  
20 possible.  
21 Q How about not to your knowledge? Would that be  
22 a fair answer?  
23 A Not to my knowledge. Either way, I couldn't  
24 say yes or no to that.  
25 Q Okay. That's fine.

29

CAROLAMPKIN COURT REPORTERS

1 A I simply don't know.  
2 Q Before you came to Wecker, where were you  
3 working?  
4 A I was on the faculty of the University of  
5 Chicago.  
6 Q Okay. Doing what?  
7 A Being a faculty member, teaching graduate  
8 students and doing consulting, also, as faculty members do  
9 sometimes.  
10 Q What department were you in?  
11 A I was in the Graduate School of Business.  
12 Q Were you a professor?  
13 A I was -- I was technically -- to be precise, I  
14 was an associate professor.  
15 Q Yeah, that's okay.

16 What years were you in Chicago?  
17 A 1982, I believe, through 1991.  
18 Q So ten years, roughly?  
19 A To be sure I've got the dates right, I'd prefer  
20 to consult my C.V., which I don't have in front of me.  
21 But, to the best of my recollection, those are the years.  
22 Q What kind of consulting were you doing in  
23 Chicago?  
24 A All of it had a -- some statistical or applied  
25 mathematical content. That is my area of expertise. Some

30

CAROLAMPKIN COURT REPORTERS

1 of it had to do with railroads and how they perform, making  
2 projection of costs, some in financial issues to do with  
3 bonds, and some in accounting, how they applied statistical  
4 measures, and some of it was indeed on risk attribution.  
5 Q Is this litigation or non-litigation or both?  
6 A Uh, none of it was litigation-related, in terms  
7 of my involvement. I did not -- I was not aware of  
8 litigation. But then, let me add -- to make sure I'm  
9 giving you an accurate answer -- I do not necessarily know  
10 and would not necessarily know the scope of the broader  
11 question in which the narrower issue that was being  
12 presented to me had arisen, so I can't say with perfect  
13 certainty it was not litigation.  
14 Q You might have been a back room pawn in a  
15 litigation game of which you were unaware?

16 A I would prefer to stand on my previous answer.  
17 But if -- by that I mean my previous answer, yes.  
18 Q You could be a worker at night. You don't have  
19 to be a pawn.  
20 How many students at the University of  
21 Chicago?  
22 A Uh, I believe when I was at the University I  
23 believe it was a number in the range between 10- and  
24 15,000.  
25 Q Faculty, how many?

31

CAROLAMPKIN COURT REPORTERS

1 A At least 1,000, I would think. And I don't  
2 know a precise number. It would not surprise me if it was  
3 in the range of 1,000 people to several thousand.  
4 Q Here comes a thousand to one shot. There is a  
5 professor there named Janus, J-a-n-u-s. Do you know him by  
6 any chance?  
7 A No, I do not.  
8 Q That is what happens to thousand to one shots.  
9 Seeing that we don't have your C.V., and we're  
10 talking about this anyway, why don't you tell me when you  
11 first came to the United States to stay, not as a visitor?  
12 A It's hard to give you a precise answer to that  
13 because I first came and stayed, but it was not the intent  
14 with which I came. It was a matter of one thing leading to  
15 another.



16 Q Okay. But with hindsight --  
17 A I came and stayed as of 1974.  
18 Q Why did you come here originally in '74?  
19 A I came here to go to graduate school.  
20 Q Where?  
21 A Initially at the University of Michigan, and  
22 later at Stanford University in California.  
23 Q I assume you have a Ph.D.?  
24 A I do.  
25 Q From where?

32

CAROLAMPKIN COURT REPORTERS

1 A Stanford University.  
2 Q What year, approximately?  
3 A Approximately 1985.  
4 Q Up until '85 had you worked here in the  
5 United States? I mean, I assume going to school and  
6 getting these advance degrees, they're hard work, but  
7 besides that, had you worked?  
8 A I had, yes.  
9 Q Doing what?  
10 A I was on the faculty of the University of  
11 Chicago starting about 1982.  
12 Q And what years were you at Stanford?  
13 A From 1975 until 1981.  
14 Q That's a topic for another day. It's not as  
15 easy as I thought it would be.

16                   When you got your doctorate from Stanford in  
17 '85 you simply remained on the faculty at Chicago; is that  
18 correct?  
19           A       That's correct.  
20           Q       When you were in Stanford, were you doing any  
21 consulting work in California?  
22           A       In California? I worked as a graduate student  
23 as a research assistant to a faculty member, and it may be  
24 that some of the projects that I worked on have  
25 accompanying background to them. Again, I'm being careful

33

CAROLAMPKIN COURT REPORTERS

1       not to rule out the possibility, but I do not recall  
2 anything that I was aware of that was specifically a  
3 consulting project.  
4       Q       Are you aware of the fact that  
5 Wecker Associates -- or whatever it was called before it  
6 was Wecker Associates -- did consulting work for the  
7 tobacco industry on non-litigation matters?  
8       MS. WILLIAMS: Objection. Assumes facts not in  
9 evidence.  
10       THE WITNESS: If I can clarify, you're asking me am  
11 I aware that they did, or whether they did?  
12 BY MR. PIUZE:  
13       Q       I don't see the distinction, so whether is  
14 fine.  
15       A       I don't know.

16 Q Okay. How much money have you billed the  
17 tobacco industry or has your firm billed the tobacco --  
18 let's start with you. How much money has your firm billed  
19 the tobacco industry for your work?  
20 A I do not know.  
21 Q Can you give me an estimate?  
22 A Not with any precision. I simply don't have --  
23 I don't have even an estimate of such a number in my mind.  
24 Q I was once doing a deposition of the president  
25 of the FAA, and at that time the FAA owned something like

34

CAROLAMPKIN COURT REPORTERS

1 900 computers, and I asked them, tell me how much he billed  
2 on a case, and he told me the computers at FAA were  
3 incapable of coming up with that number. He can tell me  
4 exactly how long it would take to get the payroll, to the  
5 money and back, but couldn't tell me the number.  
6 Off record.  
7 (Brief recess.)  
8 BY MR. PIUZE:  
9 Q I'd like you to give me some kind of a  
10 yardstick or ballpark about how much money has been billed  
11 on your behalf by Wecker for tobacco-related work, either  
12 on a per case basis or overall basis.  
13 Can you do that?  
14 A I can give you some elements of that. My time  
15 is billed, at the moment, at \$475 an hour, and the hourly

16 rate at which the company has billed my time has gone up  
17 over time. And when I arrived there some years ago it was  
18 close to 300, I think, if I remember correctly. And so the  
19 yardstick would be whatever the number of hours has been  
20 over this time multiplied by the hourly rate in effect  
21 during that time. Now the missing piece there is I do not  
22 have an estimate of what that number of hours is. I don't  
23 know such a number. I don't think about my work in those  
24 terms, and I don't have such a number in my head.  
25 Q How much did you bill on Hemley?

35

CAROLAMPKIN COURT REPORTERS

1 A I don't know. I don't know how much they  
2 billed for my time, but it would have been calculated in  
3 the way I've described to you.  
4 Q You don't have to be a statistician to multiply  
5 the number of hours and multiply by the hourly. It doesn't  
6 really get me anyplace, does it?  
7 A I take it it doesn't, if you say so.  
8 Q I say so.  
9 Well, if you testify at our trial I'm going to  
10 ask you about these issues. I'd like you to take a look so  
11 you could answer the issues. Of course you don't have to.  
12 It's your choice not to. I'm saying this on the record so  
13 I can show the jury.  
14 Okay?  
15 A I understand.

16 Q Okay. Let's go to meeting number two or  
17 conversation number two, whatever it would, in the Bullock  
18 case. You hadn't been officially hired in November. You  
19 went back to November. And what was the next thing that  
20 occurred in your involvement in this case here?

21 A I'm not able to answer that from a specific  
22 recollection. It's not so much a recollection as an  
23 inference on my part that there must have been a telephone  
24 call that we, our firm, and/or I had been retained in this  
25 matter, but I don't remember such an event specifically.

36

CAROLAMPKIN COURT REPORTERS

1 Q Okay.

2 A At some point I learned that we had been  
3 retained and that the subject matter would be the subject  
4 matter that I have already described to you. And I don't  
5 recall the details of that encounter which -- I do not  
6 recall that. It was not a meeting, but I don't -- can't  
7 bring to mind who it was who called, precisely.

8 Q Okay. So you had a couple more meetings. Were  
9 all the other meetings in San Francisco?

10 A No. I had a couple more meetings. I'm trying  
11 to think what the other meetings were. I don't recall any  
12 other meeting in San Francisco. What I was thinking of was  
13 a meeting here in Los Angeles.

14 Q All right. So you had two meetings in  
15 Los Angeles in this case?

16 A No.  
17 Q How many?  
18 A Just one meeting.  
19 Q When?  
20 A Yesterday.  
21 Q So one meeting at Shook, Hardy in San Francisco  
22 and one meeting at Arnold & Porter yesterday?  
23 A It was at Arnold & Porter, and it was  
24 yesterday. And if I had indicated three meetings  
25 previously, I was mistaken. As I sit here now, I can't

37

CAROLAMPKIN COURT REPORTERS

1 remember three face-to-face meetings.  
2 Q Who did you meet with yesterday?  
3 A Mr. Monica.  
4 Q And?  
5 A Ms. Williams.  
6 Q And?  
7 A And for part of the meeting a Mr. Lieter.  
8 Q Okay. How long?  
9 A About four hours, maybe four and a half.  
10 Q What's Shook, Hardy's involvement in this  
11 case? Do you know?  
12 A Uh, I don't know specifically, other than that  
13 Shook, Hardy first -- my first contact, as I now understand  
14 it, with this case, was from Shook, Hardy, and I've had  
15 other calls from them, the telephone calls or conversations

16 I had referred to earlier was Shook, Hardy. What their  
17 official role is, I don't know.  
18 Q How many times have you spoken with someone  
19 from Arnold & Porter about the Bullock case before today?  
20 A Before today? I believe three times.  
21 Q Okay. One was yesterday, right?  
22 A Yes.  
23 Q Or let's say three was yesterday?  
24 A Yes.  
25 Q One was when Ms. Williams met you up in

38

CAROLAMPKIN COURT REPORTERS

1 San Francisco?  
2 A Correct.  
3 Q What was two?  
4 A Two was a telephone conference around a couple  
5 of months ago. About February.  
6 Q With?  
7 A John Monica. Mr. Monica was on the line, I  
8 recall specifically, and Mr. Lieter was on this call, and  
9 there may have been others. I do not recall. My vague  
10 recollection is that there may have been some other people  
11 on the call, but I don't remember.  
12 Q What was the topic of the three-way phone  
13 conversation?  
14 A The nature of the testimony that I could  
15 deliver that might be helpful in this case. So much the

16 same as the four-way conversation at the meeting in  
17 December that we discussed earlier, except this time  
18 Mr. Lieter was involved.  
19 Q Is it conceivable that any of those  
20 conversations were as boring as this deposition?  
21 A I have no objective measure of that.  
22 Q Subjective?  
23 A But as a lay -- not an expert opinion, but in  
24 my lay opinion, I would have to say they were more  
25 interesting.

39

CAROLAMPKIN COURT REPORTERS

1 Q I would hope so.  
2 So let's hear your opinions.  
3 MS. WILLIAMS: Objection; vague. Overbroad.  
4 BY MR. PIUZE:  
5 Q The opinions you intend to give at the trial of  
6 Bullock vs. Philip Morris, let's hear it, please.  
7 MS. WILLIAMS: Same objection.  
8 THE WITNESS: If I'm asked to testify at trial, I  
9 will be responding in a question and answer format, so what  
10 I can describe to you is what I anticipate would be the  
11 area in which I would be questioned, and the kinds of  
12 responses that I could give.  
13 The area of questioning I would expect to be  
14 very largely questioned is the statistical calculations  
15 performed by staff of the Surgeon General, as reported in



16 the 1989 Surgeon General's report, and also as reported in  
17 the 1990 Surgeon General's report, as they pertain to  
18 smoking attributable deaths, and as they pertain to the  
19 relative risks of mortality from various causes, and as  
20 they pertain to relative risks of lung cancer.

21 The 1990 report has to do, as we've already  
22 discussed, with cessation and with the pattern of declining  
23 relative risks as one considers people who have ceased to  
24 smoke for various durations.

25 ///

40

CAROLAMPKIN COURT REPORTERS

1 BY MR. PIUZE:

2 Q Well, as far as I'm concerned, respectfully,  
3 that's a non-answer.

4 Sometimes lawyers, even though they don't like  
5 to act like lawyers have to talk like lawyers. So this is  
6 probably my time for today.

7 We have an entire scheme in this state called  
8 discovery, that allows each side to figure out what's going  
9 to happen at trial. Expert witness disclosure and  
10 deposition is part of that discovery. You're supposed to  
11 come here prepared to give the testimony that you're going  
12 to give at trial. I appreciate you're not in charge of  
13 asking the questions and you're at the mercy of the lawyers  
14 asking the questions. I appreciate you're talking with  
15 these folks and discussing what was going to happen with

16 these folks, so presumably you're both on the same  
17 wavelength, but you've come to Los Angeles in what was a  
18 three-, four- or five-day weekend, and I'm paying you 475  
19 bucks, and I would like to know what opinions you're going  
20 to give at trial. This is your time. Shoot.

21 What are your opinions?

22 MS. WILLIAMS: Overbroad. Objection.

23 THE WITNESS: I can take another crack at it and see  
24 if perhaps this what you have in mind. The question seems  
25 quite broad to me.

41

CAROLAMPKIN COURT REPORTERS

1 Let me take an example. There is a calculation  
2 in the report of the Surgeon General of 1989 that purports  
3 to arrive at the number of deaths attributable to smoking  
4 in the United States in 1985. And the number given there  
5 is for males and females, men and women combined, 300 and  
6 some thousand. And by some measures about 390,000, rounded  
7 up to 400,000. That calculation is not an -- it is a  
8 calculation. It is not an enumeration of 400,000  
9 particular people who died of smoking-related diseases.  
10 It's a calculated projection, and it is calculated using a  
11 statistical formula. That formula is known as the  
12 attributable risk formula and it is derived under -- it is  
13 the product of a mathematical proof or mathematical  
14 derivation that makes certain assumptions about the  
15 circumstances in which it will be applied. Those

16 assumptions are identified in the Surgeon General's  
17 reports, and the place where the formula was arrived at in  
18 the first place, and they boil down to that the assumption,  
19 but for their smoking, smokers and non-smokers are about  
20 the same, or are materially the same in -- with respect to  
21 any other risk factors that influence the outcome being  
22 measured.

23 Uh, it is my opinion that smokers and  
24 non-smokers are not the same with respect to other risk  
25 factors, and that because the calculation that leads to the

42

CAROLAMPKIN COURT REPORTERS

1 400,000 has not adjusted for or considered or corrected for  
2 the confounding -- the smoking with other risk factors,  
3 that it is an improper application of the formula and the  
4 resulting number is unreliable and inaccurate.

5 BY MR. PIUZE:

6 Q Confounded by the fact you might be drinking  
7 alcohol, right?

8 A That might be an example. It is an example.

9 Q Let me have the other confounding factors,  
10 please.

11 A Uh, diet factors. Generally there are many of  
12 them. Alcohol, arguably could fit under the heading of the  
13 things that you took into your body. The extent to which  
14 people eat saturated fats, and the extent to which they eat  
15 leafy green vegetables and fried foods and vitamins and

16 supplements. And also how much of those things they eat,  
17 whether overweight, under weight. Those are all -- there  
18 are many components of risk factor under the general  
19 heading of diet.

20 There are components of risk factor under the  
21 general heading of exercise, of the level of activity,  
22 whether people are sedentary, whether they get some  
23 exercise. And these things tend to occur together.

24 Smokers have, in a systematic way, more of  
25 those risk factors in their lives and non-smokers have, in

43

CAROLAMPKIN COURT REPORTERS

1 a systematic way, fewer of some of these risk factors.

2 Q Which?

3 MS. WILLIAMS: Objection; vague.

4 THE WITNESS: That is a broad and complicated  
5 subject on which there is -- in which there's no one  
6 sentence answer. The closest I can give you in a one  
7 sentence answer is that smokers tend to have more risk  
8 factors of other kinds, in addition to just their smoking  
9 behavior.

10 BY MR. PIUZE:

11 Q Well, it seems to me you were on an area that  
12 maybe non-smokers get more cardiovascular exercise than  
13 smokers, weren't you alluding to that?

14 A Among other things.

15 Q The fact that smokers get less cardiovascular

16 exercise than non-smokers is a confounding factor, correct  
17 or not correct?  
18 A That is a confounding factor, yes.  
19 Q Okay. Smokers tend to hang out in bars more  
20 than non-smokers, correct?  
21 A Smokers tend to have a higher level of alcohol  
22 ingestion. Whether they hang out in bars to do that, I  
23 can't speak to specifically.  
24 Q Don't you have bars in England?  
25 A There are pubs.

44

CAROLAMPKIN COURT REPORTERS

1 Q And at Stanford, Palo Alto?  
2 A Yes, over in Palo Alto.  
3 Q Not necessarily the north shore of Chicago?  
4 A Even on the north shore of Chicago.  
5 Q Don't you get the idea when you go into a bar  
6 or used to go into a bar that the proportion of smokers in  
7 the bar was proportionate to the smokers outside of the  
8 bar?  
9 MS. WILLIAMS: Objection; form. Relevance.  
10 THE WITNESS: I'm getting the idea. It's not how I  
11 do my work. I have no reason to disagree with that, but I  
12 don't have a great depth of experience of observing  
13 personally the prevalence of smokers inside as opposed to  
14 outside.  
15 BY MR. PIUZE:

16 Q That's right. You told us about that earlier,  
17 as to why you became a statistician. Do you remember that  
18 part?  
19 A I remember it.  
20 Q Okay. Are there bars in the north shore of  
21 Chicago?  
22 A Yes.  
23 Q Okay. We talked about alcohol, diet,  
24 appreciating that you think alcohol might also fit under  
25 diet and exercise. What other confounding factors are

45

CAROLAMPKIN COURT REPORTERS

1 there?  
2 A There are clusters -- there is another cluster  
3 of factors that one could call social support and stress.  
4 There's documentation about the effect on disease outcomes  
5 and mortality of participation in social settings, as  
6 opposed to relative isolation.  
7 Q And what is that general -- what do those  
8 statistics say?  
9 A They say that people who have more social  
10 contact and who are more involved and engaged with other  
11 people, for example, by being married, as opposed to being  
12 single, tend to have better health and to live longer.  
13 Q Okay. I guess I knew that, so that's a  
14 foundation or stepping stone to are smokers typically more  
15 socially isolated or more socially gregarious?

16           A     They are typically more socially isolated on  
17     measure -- on dimensions that one can measure perhaps in  
18     the CPS-II data.  
19           Q     And tell us what that means, CPS-II?  
20           A     That is the body of data used by the  
21     Surgeon General's calculations to which I had referred to  
22     earlier. CPS is an acronym in the Cancer Prevention Study.  
23           Q     Conducted by whom?  
24           A     The American Cancer Society.  
25           Q     When was the first --

46

CAROLAMPKIN COURT REPORTERS

1           A     The first cancer prevention study? Is that  
2     what you're asking me?  
3           Q     Yes.  
4           A     That started in 1959.  
5           Q     And ended?  
6           A     It ran at least through 1972. I'm not sure  
7     that it absolutely ended in '72, but elements of that study  
8     went on at least that long.  
9           Q     Who ran it?  
10          A     It was a study conducted by the American Cancer  
11     Society, also.  
12          Q     Do you know who was in charge of the study?  
13          A     I know some of the names that are associated  
14     with that study in the literature, but I was not present.  
15     I don't have personal knowledge of who actually directed

16 it. But a name that comes to mind is a Tyler Hammond.  
17 Q What about Horn? Is he part of that?  
18 A I'm aware of literature in which Hammond and  
19 Horn are associated, as well as the name of Garfinkel.  
20 Q What did CPS-I say, as far as statistics?  
21 MS. WILLIAMS: Objection; vague. Overbroad.  
22 THE WITNESS: CPS-I, like CPS-II, was a large  
23 exercise in collecting data, so it's hard to answer what  
24 did it say. There were numerous analysis of CPS-I that  
25 were conducted by different people, and they drew

47

CAROLAMPKIN COURT REPORTERS

1 conclusions from those. Perhaps that's what you're  
2 referring to.  
3 BY MR. PIUZE:  
4 Q What are the conclusions?  
5 MS. WILLIAMS: Objection; vague.  
6 THE WITNESS: The conclusion? What the conclusions  
7 are depends what the study is. I can refer to a relative  
8 example of when the Surgeon General report of 1989, on the  
9 consequences of smoking analyzed CPS-I and II data, in  
10 order to make statements about 1965, as compared to 1985 --  
11 BY MR. PIUZE:  
12 Q What did CPS-I say?  
13 A Some of what CPS-I said, interpreting it as  
14 what kinds of calculations did people perform on the data  
15 gathered through CPS-I, they calculated -- one of the kinds



16 of calculations that I have reviewed in the context of my  
17 work in this case is the calculation of relative risks of  
18 various smoking-related diseases as they were designated in  
19 the report, and the prevalences of smoking, and the  
20 combination of all these elements into the attributable  
21 deaths relating to or associated with smoking, based on  
22 CPS-I.

23 Q Do you remember earlier you told me 390,000,  
24 rounded up to 400,000?

25 A I mentioned that number, yes.

48

CAROLAMPKIN COURT REPORTERS

1 Q What did CPS-I have to say about yearly deaths  
2 attributable to smoking?

3 A I need to report CPS-I itself said nothing  
4 about that, but the calculation based on CPS-I that I  
5 referred to, arrived at a number of approximately -- the  
6 way to be definite about this is to refer to CPS-I, but the  
7 CPS-I calculation which I do have with me -- but in round  
8 numbers, CPS-I, I think, found 180,000 attributable deaths  
9 of men and women, calculated that number for ten disease  
10 categories in 1965.

11 Q And was that number good only for '65, or was  
12 that number representative of any other years?

13 A It was calculated for 1965 using mortality  
14 information for 1965 and prevalence information that was  
15 thought to be relevant to 65,000, to the extent that

16 another year, that those same inputs might be correct for  
17 that year, that number would also be the number that you  
18 would get.  
19 Q Have you checked?  
20 A No.  
21 Q Have you done any of your scholarly work to see  
22 if these numbers applied to other years?  
23 A I've not directly checked to see whether the  
24 inputs for 1965 would have been the same for other years.  
25 Q Okay. When the work was done, to go back to

49

CAROLAMPKIN COURT REPORTERS

1 CPS-I and II, that yields your 180- figure and your 390-  
2 figure that you gave earlier, was any work done at that  
3 time for years in between?  
4 MS. WILLIAMS: Objection. Assumes facts not in  
5 evidence.  
6 THE WITNESS: There is -- your question seems very  
7 broad. Was any work done? What I will take to be what  
8 you're getting at, and so I will answer, is were numbers  
9 reported in similar format for parallel calculations for  
10 years in between, in the document to which I'm referring,  
11 and the answer is no, those were the -- those were two  
12 benchmark years that were represented in the calculations  
13 which I'm referring.  
14 BY MR. PIUZE:  
15 Q If '65 was the benchmark year that yielded

16 180,000 deaths, what year was the benchmark for 390-?  
17 A That was 1985.  
18 Q Okay. Do you have any idea why the number of  
19 deaths attributable to smoking more than doubled over a  
20 20-year period?  
21 MS. WILLIAMS: Objection. Calls for speculation.  
22 THE WITNESS: In -- I know about the elements of the  
23 calculation that caused the number to rise. For example,  
24 the relative risks calculated from CPS-II are generally --  
25 the relative risks of smoking represented are different

50

CAROLAMPKIN COURT REPORTERS

1 from and smaller than the relative risks calculated from  
2 CPS-II data.  
3 BY MR. PIUZE:  
4 Q Why?  
5 A That would be one factor.  
6 Q Tell me what -- tell me the other factors,  
7 too. Let's keep going with that.  
8 A All of the other elements of the calculation  
9 changed also. The prevalences. And, in fact, the number  
10 of deaths in the United States was greater in 1985 than in  
11 1965 simply because the population was greater, so various  
12 things changed. But an important area that changed was the  
13 relative risks.  
14 Q How did that change?  
15 A They went up.

16 Q Why?  
17 A I don't think -- I don't know that with  
18 precision, and I don't think anyone knows that with  
19 precision. There were a number of differences between  
20 CPS-I and CPS-II, apart from the era in which the surveys  
21 were conducted.  
22 For example, CPS-II was a survey of the entire  
23 50 states, and a study of the entire 50 states. And CPS-I  
24 was less broad. It was a 25 state study. And so that is  
25 an example of a difference between CPS-I and CPS-II. I

51

CAROLAMPKIN COURT REPORTERS

1 don't know the detailed reasons why the relative risks as  
2 calculated from data collected beginning in 1959, in  
3 specific terms, are different from the relative risks  
4 calculated in data beginning at a much later date, and I  
5 don't think anyone knows that with precision and  
6 certainty.  
7 Q CPS-I was extrapolated from the whole country,  
8 wasn't it?  
9 MS. WILLIAMS: Objection; vague.  
10 THE WITNESS: To the extent that one applies  
11 relative risks calculated from CPS-I to attributable deaths  
12 for the entire country, yes, it was extrapolated in that  
13 sense. I'm not sure what you had in mind with your  
14 question.  
15 BY MR. PIUZE:

16 Q CPS-I was designed in such a way so that the  
17 states were kind of representative? Weren't there a lot of  
18 rural states and industrial states?  
19 A There was certainly a design of some kind  
20 behind CPS-I, but the one thing it was not was a  
21 scientifically designed probability sample survey. So it  
22 did not have the elements that are necessary for a  
23 scientifically valid extrapolation from a sample to a  
24 universe.  
25 Q Well, CPS-I weighted towards the East Coast?

52

CAROLAMPKIN COURT REPORTERS

1 A I believe that is true, generally, but I don't  
2 know specifically which states were involved.  
3 Q After 1985, are there any other years for which  
4 analyses have been done to yield the number of deaths per  
5 year caused by tobacco?  
6 MS. WILLIAMS: Objection. Calls for speculation.  
7 THE WITNESS: There have been other calculations,  
8 published calculations of smoking attributable deaths, and  
9 the ones that come -- what I'm thinking of, what I saw that  
10 is a publication from the Center for Disease Control &  
11 Prevention, through their MMWR publication in 1993. There  
12 was an update for the year of 1990, for instance.  
13 BY MR. PIUZE:  
14 Q So what is "MMWR"?  
15 A It is the Mobility & Mortality Weekly Report.

16 Q And what numbers did that yield?  
17 A Approximately 420,000, I think, 419-.  
18 Q Tell me the year again.  
19 A 1990.  
20 Q Why is the number going up from '65 to '85 to  
21 '90?  
22 MS. WILLIAMS: Objection. Calls for speculation.  
23 THE WITNESS: Well, there are two parts to your  
24 question. From '65 to '85 and then '85 to '90. The '65 to  
25 '85 we discussed previously. That has to do with a

53

CAROLAMPKIN COURT REPORTERS

1 different data set being used and different relative risks  
2 being used and all kinds of things changing between the two  
3 calculations. The 1990 calculation used the same relative  
4 risks input it used in the '85. That is to say, the  
5 Surgeon General relative risks as used for the 1985 study,  
6 based CPS-II data.  
7 BY MR. PIUZE:  
8 Q Why did it go up from '85 to '90?  
9 A There are at least two reasons. There are the  
10 Surgeon General's number for 1985 is based on not exactly  
11 the same set of designated smoking-related diseases as the  
12 1990 report.  
13 And, secondly, the -- once the attributable  
14 fractions of diseases have been calculated, those  
15 attributable fractions need to be multiplied by and applied

16 to the deaths in the disease categories as designated as  
17 smoking-related diseases. And those were different in 1990  
18 from what they were in 1985.

19 Q Do you think the method by which the 1985 data  
20 was collected and ultimately yielded the 390,000 deaths per  
21 year figure was more accurate than the method used to get  
22 the data which yielded the 180,000 deaths per year for  
23 1965?

24 MS. WILLIAMS: Objection. Calls for speculation.

25 THE WITNESS: The -- I think that the scope of the  
54

CAROLAMPKIN COURT REPORTERS

1 data collection of the CPS-II data was broader in the sense  
2 that I have described to you than the scope of the CPS-I  
3 data. It's hard. You're using the concept of whether the  
4 methods was accurate and that is a -- that is a hard one,  
5 but I'll take a crack at it.

6 Both CPS-I and CPS-II were conducted by  
7 volunteer members of the American Cancer Society, among  
8 family and friends. So they both tend to over select white  
9 suburban dwellers. And in that sense it's not accurate as  
10 representing the U.S. population, generally, but there are  
11 other components of the 1990 and '85 calculation that are  
12 more representative in a sense that they were, in fact,  
13 based on a random sample and designed -- scientifically  
14 designed population of the U.S. whole. The scope of CPS-II  
15 is broader. Did it suffer the same kind of

16 non-representative broadness of CPS-I?  
17 BY MR. PIUZE:  
18 Q That isn't a variable because of the problem  
19 involved?  
20 A Yes, it's difficult, and not impossible for me  
21 to say whether or not it's less of a problem in CPS-II or  
22 not.  
23 Q Okay. Then I say to you, as inartful as my  
24 question was, you didn't answer it. All you showed me was  
25 a non-variable, and I'm looking for a variable.

55

CAROLAMPKIN COURT REPORTERS

1 What was there that was different about the way  
2 things were done in '85 -- excuse me, in '65, from '85?  
3 A CPS-II had a broader scope in all 50 states,  
4 and therefore had the opportunity at least to be more  
5 representative. But as it turns out, was still limited to,  
6 or still over representative of suburban residents.  
7 Q Okay. I blew that. Let's go back a second to  
8 the last question.  
9 (Whereupon, the record was read as follows:  
10 "Q Okay. Then I say to you, as inartful as  
11 my question was, you didn't answer it. All you  
12 showed me was a non-variable, and I'm looking for a  
13 variable.  
14 "What was there that was different about  
15 the way things were done in '85 -- excuse me, in



16 '65, from '85?")  
17 MS. WILLIAMS: Objection; vague. Calls for  
18 speculation.  
19 BY MR. PIUZE:  
20 Q Shoot.  
21 A No, I think it was about the same, but for the  
22 slight increase in scope.  
23 Q Thank you. Didn't Hammond's wife throw a big  
24 party for all the volunteer pollsters?  
25 A I don't know about that one way or the other.

56

CAROLAMPKIN COURT REPORTERS

1 It would have to be a big party.  
2 Q Do you think that if statistical analysis was  
3 done now that the number of deaths attributable to smoking  
4 would have gone up between '90 and '95?  
5 MS. WILLIAMS: Objection. Calls for speculation.  
6 THE WITNESS: That would depend on the statistical  
7 analysis that was done, on the nature of that analysis.  
8 And there are some analyses that would show that, I'm sure,  
9 and there are others that would not.  
10 BY MR. PIUZE:  
11 Q You're familiar with the ones that do?  
12 MS. WILLIAMS: Objection; vague.  
13 THE WITNESS: I'm aware of one very recently  
14 released analysis parallel to the ones that we're  
15 discussing here that gets a slightly higher number.

16 BY MR. PIUZE:  
17 Q What number?  
18 A Slight in percentage terms, large absolute  
19 number. About 440,000, in that vicinity.  
20 Q For what year?  
21 A That's for the range of years from 1995 through  
22 1999.  
23 Q Whose study?  
24 A That, again, is the MMWR and CBCP.  
25 Q That was important. Do you know who Viscusi

57

CAROLAMPKIN COURT REPORTERS

1 is? Have you ever been heard of Viscusi?  
2 A I have.  
3 Q Do you know him?  
4 A I do.  
5 Q How have you heard of him?  
6 A I know he has written on risk perceptions, and  
7 I believe he is an economist at Harvard. I used to be an  
8 academic, and I used to be aware of work that was being  
9 circulated. And his name probably came to my attention  
10 that way. I've -- I'm familiar with his name and have been  
11 for a long time, without being able to recall exactly or  
12 how exactly I first encountered it.  
13 Q He was in here yesterday, and Viscusi mentioned  
14 that there were a couple of new analyses out that basically  
15 said that the number of deaths attributed to smoking by the

16 Surgeon General were high.  
17 Are you aware of any new studies that are out  
18 saying that?  
19 MS. WILLIAMS: Objection; vague as to --  
20 THE WITNESS: Understanding new as something having  
21 appeared within, let's say, the last six to twelve months,  
22 nothing comes to mind that fits that characterization. I  
23 can think of such studies, but not something new.  
24 BY MR. PIUZE:  
25 Q Well, I guess I'm in no position to know what

58

CAROLAMPKIN COURT REPORTERS

1 he meant by "new," and I didn't follow it up.  
2 What do you know that may or may not be new  
3 that backs up that kind of thought?  
4 A Uh, I'm aware -- things that come to mind are a  
5 study by -- published, I believe, in the American Journal  
6 of epidemiology, about 1993 -- by Arthur Sterling and  
7 others -- that have looked into a comparison of  
8 calculations placed on CPS-II versus nationally  
9 representative samples collected by the United States  
10 Government and what effect that has on the calculations.  
11 And, also, what effect adjusting for certain confounders  
12 has on the calculation, and found that the Surgeon General  
13 numbers are high.  
14 Q Was an alternative number given?  
15 A There were some exemplar alternatives. I don't

16 think the study settles on a specific single number as the  
17 correct number. It's a demonstration of the sensitivity of  
18 the Surgeon General's number to certain factors. But, yes,  
19 I recall numbers in the range of 150- or 180,000.  
20 Q Deaths attributable to smoking?  
21 A Right.  
22 Q Per year?  
23 A As an -- as a demonstration of the sensitivity  
24 of the 400,000 to certain -- to the factors that I've  
25 described.

59

CAROLAMPKIN COURT REPORTERS

1 Q And for what year would that apply?  
2 A I have the study here, and to tell you that  
3 with complete confidence and certainly, I have to turn to  
4 the study. But my best recollection, as I sit here, is  
5 that that study as published in '93 was looking back at the  
6 Surgeon General's calculations of 1989, applicable to the  
7 year 1985. So that's -- I believe the answer to your  
8 question, therefore, is 1985.  
9 Q It is.  
10 In other words, although the authors of the  
11 study you're discussing, Sterling, et al., '93, doesn't  
12 give a magic number, the authors demonstrated you could  
13 come up with a number that was roughly 50 percent of what  
14 the Surgeon General came up with, correct?  
15 A That's if you think of 150,000 as roughly

16 50,000 of 400-, that's a fair characterization.  
17 Q Okay. Well, I guess I don't. What's 40 into  
18 15, 37 percent?  
19 A That would be two and a half times 15. It  
20 would be 37 and a half percent.  
21 Q Well, here you are. Do you think that because  
22 of the confounding factors that existed, that the  
23 Surgeon General's numbers for the number of deaths  
24 attributable to smoking is too high?  
25 A Yes.

60

CAROLAMPKIN COURT REPORTERS

1 Q What number do you have?  
2 A I don't have a number.  
3 MS. WILLIAMS: Objection; vague.  
4 THE WITNESS: My opinion is that the calculation  
5 that leads to 400,000 is unreliable for reasons that I've  
6 pointed to. I know of alternative numbers like the ones  
7 we've just been discussing, but I've performed no  
8 calculation of my own, and I don't have a number in mind.  
9 BY MR. PIUZE:  
10 Q Why didn't you perform a calculation on your  
11 own?  
12 A I don't think it can be done in an accurate and  
13 reliable way with the data that are available for doing  
14 such a calculation, that I know of. And with the -- in a  
15 way that copes with the difficulties of confounding in such

16 data.  
17 Q Okay. So the Surgeon General is high, but you  
18 don't how high?  
19 A I think substantial, but I don't know. I don't  
20 have an alternative specific number.  
21 Q If someone from Arnold & Porter says to you at  
22 the trial, should you come to the trial, okay, the  
23 Surgeon General was high, give us an alternative number,  
24 you're going to say, I don't have an alternative number?  
25 A That's what I would say.

61

CAROLAMPKIN COURT REPORTERS

1 Q Excellent. That was all year, all times, east  
2 or west of the Mississippi?  
3 A You're speaking metaphorically, I take it.  
4 I don't have an alternative number on the  
5 Surgeon General's 400,000, and I don't think such a number  
6 can be calculated in a reliable way, using the data that  
7 I'm aware of.  
8 Q I don't know if I was speaking metaphorically.  
9 All I'm trying to do is is if someone from Arnold & Porter  
10 would say, is it twice as high? It's not a specific  
11 number, but you could say, "yes," and I would have been  
12 blind-sided.  
13 So is it twice as high as it should be?  
14 A There are ways to interpret the Sterling work,  
15 indicating it could be twice as high, but I don't have in

16 my head a number. It could be twice as high, but it's not  
17 my testimony that it is twice as high.  
18 Q You don't have a number, a multiplier, a  
19 divider, or anything else?  
20 A I do not.  
21 Q Excellent.  
22 As you were telling me about the scope of your  
23 testimony here, I took it to mean that you're sort of  
24 critiquing the attorney -- I'm sorry -- the  
25 Surgeon General's numbers, and then I took it to mean that

62

CAROLAMPKIN COURT REPORTERS

1 you had a second area, and that had to do with the  
2 statistical risk of harm, if someone had quit at various  
3 times. I might have taken it totally wrong.  
4 Are those the two areas on which you're going  
5 to testify?  
6 A I think that covers it. I don't think of those  
7 as two distinction areas. It's the same set of  
8 calculations, but, yes, I can see how one could think of it  
9 as two areas. Those are the -- those are the two headings  
10 that seem reasonable to me.  
11 Q Tell me what you know about Betty Bullock,  
12 would you, please.  
13 MS. WILLIAMS: Objection; vague. Overbroad.  
14 THE WITNESS: I know that she is the plaintiff in  
15 this case. I know that she has been diagnosed with lung

16 cancer. I know that she smoked for many years. I can  
17 think of a number of other things that I know of  
18 Ms. Bullock, and I'll stop there, in case you have  
19 something more specific in mind.  
20 BY MR. PIUZE:  
21 Q No. I want to know what you know about her,  
22 please.  
23 MS. WILLIAMS: Same objection.  
24 THE WITNESS: I know she was born in 1938, and that  
25 she started to smoke as a 17-year-old, or thereabouts; that

63

CAROLAMPKIN COURT REPORTERS

1 she did not smoke very heavily, not as much as a pack a  
2 day, until she was in her 20s, and that at some point  
3 during her 20s, which would have been during the 1960s --  
4 she would have been 20 in 1958, so her 20s would be largely  
5 during the 1960s, she began to -- she began to smoke more  
6 and reached the level of a pack a day.  
7 I know that she later in her life smoked more  
8 than a pack a day; that she was diagnosed in February of  
9 2001 with lung cancer -- I believe with lung cancer of the  
10 small cell variety. I know that it has metastasized to her  
11 liver; that she has a daughter named Jody Bullock  
12 Goldstein, or Goldstein, who is her husband, whose name is  
13 Mark Goldstein, and he was deposed in this case.  
14 I know that her daughter at many points during  
15 her life asked her mother or tried to persuade her mother



16 to quit, maybe beginning around junior high, or  
17 thereabouts; that the subject definitely came up between  
18 them.  
19 I know that between then and now her daughter  
20 had also talked to her about smoking. For instance, when  
21 her daughter was pregnant, that her daughter expressed, at  
22 deposition, a concern about exposing her -- I'm not sure if  
23 it was her unborn child or her child after birth, to her  
24 mother smoking.  
25 MS. WILLIAMS: I'm going to interject a moment.

64

CAROLAMPKIN COURT REPORTERS

1 Do you want him to recite everything he  
2 remembers from the deposition transcript?  
3 MR. PIUZE: I didn't know he'd read the deposition  
4 transcript.  
5 MS. WILLIAMS: You didn't ask. To quote you from  
6 the Goldberg deposition, is this a memory test?  
7 BY MR. PIUZE:  
8 Q Do you know who Mark Goldstein is?  
9 A He is Ms. Bullock's son-in-law, I believe.  
10 Q Do you know what he does for a living?  
11 A Yes.  
12 Q What?  
13 A I understand he's a lawyer.  
14 Q Is that all you understand he is?  
15 A I also understand that as a lawyer -- I don't

16 know very much about him. I also understand that in some  
17 way, shape or form he was involved with, or had some  
18 contact with the Boeken case.  
19 Q Do you know that he's a private investigator?  
20 A No, I don't.  
21 Q Do you know why we know so much about Ms. Crow?  
22 A About whom?  
23 Q Whose depositions have you read?  
24 A Uh, with the caviot that having -- reading the  
25 deposition is perhaps too strong, because I was not

65

CAROLAMPKIN COURT REPORTERS

1 studying, and reading them line by line. I've read  
2 depositions of -- I have skimmed, shall I say, depositions  
3 of Ms. Bullock, herself -- and let me be specific. I have  
4 a read four volumes, and I have no knowledge whether there  
5 are others or not. And I have read, I think, two volumes  
6 of deposition of her daughter, and one volume -- or  
7 skimmed, rather more likely than the others, one volume of  
8 deposition of Mark Goldstein.  
9 Q Anything else?  
10 A No.  
11 Q No other depositions?  
12 A In this case those are the depositions I've  
13 read.  
14 Q Okay. Did you read depositions in the Hemley  
15 case?

16           A     I think my vague recollection is that I did,  
17 but I don't have a clear recollection at this point. It  
18 was several years ago.  
19           Q     How long did it take you to read these  
20 depositions: Four Bullock, two Judy Goldstein, and  
21 Mark Goldstein?  
22           A     As I testified, I skimmed the depositions. I  
23 skimmed them. I spent 20 minutes on each of them.  
24           Q     Boy, you're a fast skimmer.  
25                 Off the record.

66

CAROLAMPKIN COURT REPORTERS

1                     (Discussion held off the record.)  
2           MR. PIUZE: Back on.  
3           Q     Okay. What other information were you provided  
4 in this case that is specific to Ms. Bullock's case,  
5 besides the depositions which you just mentioned?  
6           A     There was another document, a set of  
7 interrogatory responses. It's a sort of compound document,  
8 stapled together. I'm not sure whether it's one set or  
9 bound as two or more sets of responses. I'll call it the  
10 Interrogatory Responses.  
11          Q     What else?  
12          A     The other documents were all of a legal  
13 character. The complaint in this case. The Philip Morris  
14 designation of experts, or a Philip Morris designation of  
15 experts, that included me, and there have been others.

16 Q Did you recognize any other names on there  
17 besides your own and Viscusi's?  
18 A None that come to mind. But to be sure I'd  
19 have to look at the document. I can look at it and see if  
20 there are any others that I recognize. And the noted  
21 depositions. And I can't think of any other documents in  
22 this case, but I have all of the documents that I've  
23 reviewed with me, so if we need to be really precise, I can  
24 pull them out and we can go through them.  
25 Q Did you ask for these things, or were they just

67

CAROLAMPKIN COURT REPORTERS

1 given to you?  
2 A I don't have a specific recollection of asking  
3 for them, but the way such -- so I should simply say I  
4 don't recall.  
5 Q Okay. What did you learn from the Answer to  
6 Interrogatories? Anything of any significance to you?  
7 A I learned nothing that I used directly in any  
8 respect, other than knowing the basic -- Ms. Bullock basic  
9 demographics and facts about her smoking history, so that  
10 if I were to talk about the declining levels of relative  
11 risk associated with different durations of cessation, I  
12 would know had she quit at a certain year, how old would  
13 she have been at that point and so on. So some of the  
14 facts that -- some of what I understand to be the facts  
15 about Ms. Bullock that I recited in my lengthy answer to

16 your previous question may have come from the  
17 Interrogatories. I just don't recall what I learned from  
18 deposition, as opposed to Interrogatories. In fact, I'm  
19 sure some of the dates came from Interrogatories, like the  
20 date of birth.

21 Q You mean, that long answer where the defense  
22 attorney interrupted to ask if I really, truly wanted to be  
23 discussing things in that length?

24 A That's the one I mean.

25 Q I thought the criticism was more directed to  
68

CAROLAMPKIN COURT REPORTERS

1 me, than you.

2 A I always think that about criticism.

3 Q I thought it was a crummy question.

4 A I thought you might mean that, but I'm not  
5 as -- you know, I'm not a lawyer.

6 Q That's why you're in a position to know whether  
7 it's a crummy question. Lawyers are the last ones to  
8 know.

9 A It was not a statistical question.

10 Q Tell me a statistical answer. Let's hear about  
11 your statistical opinions as relate to Ms. Bullock.

12 MS. KAPLAN: Objection; vague. Overbroad.

13 THE WITNESS: Well, I know that if that -- I know  
14 that Ms. Bullock, being born in 1938, would be 64, or  
15 thereabouts, today, and I know that had she quit smoking,

16 say, in 1996, that she would then, in 1966, should have  
17 been 28 years old, and/or thereabouts, and would have had  
18 approximately 11 years of smoking, had she -- based on my  
19 understanding that she started at 17 -- and so -- and also  
20 based on my understanding from the materials that I read,  
21 this was not a heavy smoking, that it was something less  
22 than a pack every day, in terms of cumulative history of  
23 smoking, that puts her in the less than a half a pack a  
24 day. That put her cumulative, certainly, less than ten  
25 pack years, and maybe in the -- somewhere in the five to  
69

CAROLAMPKIN COURT REPORTERS

1 ten pack years, but I don't know that with precision, so  
2 age 28, combined with less than a pack a day, tells me --  
3 and combined with a historical quit date of 1966 -- gives  
4 me some facts to work with in locating Ms. Bullock, had she  
5 quit and placed herself in the group of long-term quitters,  
6 as of 1966, what the statistics would have been for her, as  
7 reflected in the Surgeon General's calculations of the  
8 report of 1990.  
9 BY MR. PIUZE:  
10 Q All right. And then I get to say, and the  
11 number is?  
12 A Uh, the number is something in the range  
13 between one, and the number being the relative risk of lung  
14 cancer is something in the range of between one and two.  
15 It's heading towards one. One meaning the level of risk of

16 a lifetime never smoker. And it reflects that is a  
17 dramatically lower level of risk than the level of risk as  
18 reflected in those calculations for someone who continued  
19 to smoke through 2001.

20 Q So you're saying -- let's see if I can box this  
21 up as tight as possible.

22 If someone smokes for ten years, less than a  
23 pack a day, and gives it up 35 years later, that person's  
24 odds of getting lung cancer are close to the same as if  
25 they never smoked to start with?

70

CAROLAMPKIN COURT REPORTERS

1 MS. WILLIAMS: Objection. Mischaracterizes his  
2 testimony.

3 BY MR. PIUZE:

4 Q Isn't that what you just said?

5 A Close, in the sense of my previous answer.  
6 Close relative certainly when compared to the risk of a  
7 person who continued to smoke with, for instance, the  
8 smoking history of Ms. Bullock through all those years.  
9 And all of this -- I don't want to waste your time and keep  
10 repeating -- all of this is his reflected in the  
11 Surgeon General's statistics.

12 Q You're just adopting the Surgeon General's  
13 statistics?

14 MS. WILLIAMS: Objection.

15 THE WITNESS: I am explaining what the circumstances

16 would be. And I think I've made that clear in how I've  
17 answered your question. I don't -- you would have to  
18 clarify for me what you mean by "adopt," for me to answer  
19 that question directly.  
20 BY MR. PIUZE:  
21 Q Are -- all you're doing is giving them back me,  
22 aren't you?  
23 MS. WILLIAMS: Objection. Mischaracterizes his  
24 testimony.  
25 MR. PIUZE: Certainly.

71

CAROLAMPKIN COURT REPORTERS

1 Q Sir?  
2 A I am interpreting the circumstances pertaining  
3 to Ms. Bullock that I have outlined to you in the context  
4 of the tables of risk numbers provided in the  
5 Surgeon General's report.  
6 Q Statistically, if Ms. Bullock had stopped in  
7 19- -- what is it, '66 that we're talking about here?  
8 A That was my hypothetical.  
9 Q Well, what would her risk factor be compared to  
10 a non-smoker?  
11 A I would have to turn to the Surgeon  
12 General's -- I'm sorry.  
13 Q To a lifetime non-smoker, who never smoked.  
14 A Lifetime never smoker it would be on the order  
15 of risk factor, meaning relative risk, and as reported by



16 the Surgeon General, it would be on the order of 1.4.  
17 Q There are no confounding factors for small cell  
18 lung cancer, are there?  
19 A Uh, I have no basis for agreeing or disagreeing  
20 with that statement. I have not studied the confounding  
21 factors of any specific cell type.  
22 Q Is lung cancer virtually always fatal?  
23 MS. WILLIAMS: Objection. Calls for speculation.  
24 THE WITNESS: It is my understanding that it is  
25 fatal. It is my general understanding, outside of my area

72

CAROLAMPKIN COURT REPORTERS

1 of expertise, that some people survive a number of years,  
2 and there may be long-term survivors. I have no expert  
3 knowledge of the rates of survival.  
4 BY MR. PIUZE:  
5 Q Is small cell lung cancer caused only by  
6 smoking?  
7 A Uh, I have no expert knowledge of what causes  
8 and/or may be the sole cause of small cell lung cancer, or  
9 any other specific histologic type.  
10 Q Assuming for the sake of argument that a small  
11 cell lung cancer is caused exclusively by smoking  
12 cigarettes and, in fact, it's always a fatal disease,  
13 assuming those two things, then there are no confounding  
14 factors that can exist?  
15 MS. WILLIAMS: Objection.

16 BY MR. PIUZE:  
17 Q As far as why a heavy smoking -- excuse me --  
18 why a person with small cell lung cancer dies, right?  
19 MS. WILLIAMS: Objection.  
20 THE WITNESS: Your premise does not leave me -- I'm  
21 sorry. You added and dies. Would you -- could I have the  
22 question read back so -- just so I can make sure that I've  
23 got the premises and the conclusion.  
24 MR. PIUZE: I will say it again.  
25 Q Assuming, (A), small cell lung cancer is caused

73

CAROLAMPKIN COURT REPORTERS

1 only by smoking cigarettes and, (B), that it's always a  
2 fatal disease, than when someone dies from small cell lung  
3 cancer, there can be no confounding factors, right?  
4 MS. WILLIAMS: Same objection.  
5 THE WITNESS: What is confusing and ambiguous --  
6 what is confusing and ambiguous is that the premise of your  
7 question is that as -- if I'm understanding you correctly,  
8 is that the only way a cause -- you're asking me to assume  
9 that the only way a cause of small cell lung cancer ever  
10 arises is as a causal consequence of smoking?  
11 BY MR. PIUZE:  
12 Q Yes, sir.  
13 A Once you've given me that premise, you don't  
14 give me -- need to give me the rest of the premise to  
15 arrive at the conclusion that a cause of small cell lung

16 cancer, on the premises that you have asked me to assume,  
17 must therefore be a result of what you have told me is the  
18 only possible cause of it.

19 Q So there are no confounding factors?

20 A That depends entirely on what you mean by  
21 confounding factors. And there is no -- I see no room for  
22 confounding factors in the logic that leads me -- that  
23 leads from the assumption of what you've asked me to  
24 assume. To the conclusion that you have asked me to agree  
25 with, there are no willful confounding factors in there.

74

CAROLAMPKIN COURT REPORTERS

1 Q Got it. Thank you.

2 Now, assuming that lung cancer, generally --  
3 and I'm not limiting it to a histologic -- good word for  
4 you -- histologic type of lung cancer, generally, just  
5 assume it's caused 90 percent plus percent of the time by  
6 smoking cigarettes -- I want you to assume that to be  
7 true. There is no room for a confounding factor in 90-plus  
8 percent of lung cancer cases, right?

9 MS. WILLIAMS: Objection to form. Incomplete  
10 hypothetical. Vague as to "no room."

11 THE WITNESS: That's complicated.

12 And let me try it this way: Understanding your  
13 premise, as of all cases of lung cancer, some large, some  
14 very large fraction, 90 percent --

15 BY MR. PIUZE:

16 Q 90 plus.  
17 A Well, for specificity, I'd like to pick a  
18 number. 92.  
19 Q Pick 90.  
20 A 90.  
21 I think you're asking me to assume that  
22 90 percent of cases, a specific 90 percent of the cases  
23 that occur of lung cancer, are a causal result of smoking  
24 and of nothing else.  
25 Q Right.

75

CAROLAMPKIN COURT REPORTERS

1 A If one knows about a given case that it is a  
2 causal result of smoking and nothing else, then in that  
3 narrow domain I can see no role for confounding.  
4 Q Okay. Back to risk factors.  
5 When we were talking about 1966, under what  
6 heading would that discussion fall, relative risk?  
7 A That's one possible heading on there, yes.  
8 Q Can you give me another, whatever it is that  
9 you're --  
10 A Surgeon General's implications of numbers  
11 reported by the Surgeon General in 1990.  
12 Q Every since I told him about that 120,000 bucks  
13 the answers have gotten longer.  
14 What if Ms. Bullock had stopped smoking in 1970  
15 instead of 1966? What would the relative risks to her be

16 then?  
17 A The answer would be the -- based on the source  
18 that I have cited, would be the same as the answer that I  
19 gave you previously.

20 In other words, a number in the vicinity of  
21 1.4. And the reason is -- well, I will stop there.

22 Q What's the reason?

23 A The reason is that the categories of duration  
24 of cessation considered by and reported by the  
25 Surgeon General range up to 16 or more years of cessation,

76

CAROLAMPKIN COURT REPORTERS

1 and so the number that I gave you is a number that pertains  
2 to 16 or more years of cessation. Now had she quit in  
3 1966, she would have placed herself in the 16 or more years  
4 of cessation category of that tabulation. Had she done  
5 that, at least she would have had a relative risk of 1.4.  
6 1970 gets us to the same point. And the reason is that the  
7 results reported by the Surgeon General, the calculations  
8 are not so finely graduated that one can distinguish  
9 between 16 or more years and some very long period of  
10 cessation.

11 The best that one can say is that Ms. Bullock,  
12 had she quit in 1966 and placed herself in one of those  
13 categories, she would have quit at a young age, with a  
14 low -- relatively low intensity history of smoking, and  
15 relatively small period of smoking, all of which are

16 documented as factors tending to lower the resulting  
17 relative risks. So these things put her at the low end of  
18 the range, of which the 1.4 is the representative answer.  
19 Q Well, when does 1.4 stop being the  
20 representative answer?  
21 A At a point at which we would no longer be in  
22 the 16 or more years of quitting. So that would be  
23 approximately 1985.  
24 Q And then where does her relative risk go to?  
25 A For that I have to consult the document itself.

77

CAROLAMPKIN COURT REPORTERS

1 Q You haven't figured that one out yet?  
2 A I was looking at that one, but unless you mean  
3 this to be a memory test, I don't have that number in -- if  
4 it is a memory test, I fail. I don't have that number in  
5 my head.  
6 Q I'm not the one that interjected memory test  
7 into this deposition, I don't believe.  
8 Were you told that '66 was a magic year?  
9 MS. WILLIAMS: Objection; vague.  
10 THE WITNESS: I was certainly asked about 1966 as an  
11 exemplar year, because I understood -- and I understood it,  
12 in the context of the conversation, why that was so.  
13 BY MR. PIUZE:  
14 Q Why?  
15 A It's my understanding that warnings went onto

16 cigarette packages in 1966. I have a general and certainly  
17 not expert understanding, not that there were some changes  
18 to the warnings, and that's not the only relevant date, but  
19 I'm aware of the Surgeon General's report of '64, and there  
20 was no Congressional action in '65, and it was my  
21 understanding that warnings went on cigarettes.

22 Q All this understanding comes from meetings with  
23 the lawyers?

24 A It comes from my -- it comes from various  
25 sources. It comes from my reading of documents that I've

78

CAROLAMPKIN COURT REPORTERS

1 consulted in the course of my work on this case, and  
2 others, and the specific question about what about 1966, in  
3 the context of Ms. Bullock's case, is a question that came  
4 to me from one or another of the lawyers with whom I've  
5 spoken about this.

6 Q Did one or the other lawyers with whom you  
7 spoke suggest any alternative dates to you that you should  
8 be concerned with?

9 A Only -- I recall no occasion of anyone  
10 suggesting a date I should be concerned with. I do recall  
11 conversations about dates that were pertinent in  
12 Ms. Bullock's case. And 1966 was one of those. Others --

13 Q What were the others? What were the other  
14 pertinent days of which you're aware from those  
15 conversations?

16           A     The only others that come to mind, other than  
17     dates that I know -- that I believe I know from reading  
18     interrogatories or depositions, not from lawyer  
19     conversations are the early 1970s.

20           Q     And what about those? What happened in the  
21     1970s?

22           A     It's my understanding that the warning text  
23     changed, either in 1969 or 1970, to stronger language and  
24     perhaps a rotating they text.

25           Q     The first part is right. The second part is  
79

CAROLAMPKIN COURT REPORTERS

1     one -- the second part didn't come until '84.

2           Tell you what. I'd like to know, I have a  
3     couple of dates, one of which is 1994. So let's just  
4     assume for the sake of argument that in 1994 -- do you know  
5     who Mr. Campbell is?

6           A     I don't know who your Mr. Campbell is. I've  
7     known people, but not the one you're referring to.

8           Q     No. Actually, I deposed a Mr. Campbell at  
9     Lloyds of London and he was, if you can picture an  
10    alternative James Bond, he was it. Scott, the whole nine  
11    yards. Let me pose the question.

12           I'd like you to assume that in 1994 the Chief  
13    Executive Officer of the Philip Morris company,  
14    Mr. Campbell, went before the United States Congress and  
15    did not lie, and raised his hand and swore under oath that



16 Philip Morris had known for decades that smoking caused  
17 lung cancer and he was now confessing that fact publicly.  
18 And I'd also like you to assume that as a result of that  
19 confession Betty Bullock stopped smoking that day and never  
20 resumed.

21 What would her relative risk factor for getting  
22 lung cancer be?

23 MS. WILLIAMS: Objection to form.

24 THE WITNESS: The only part of the premises that I  
25 can actually use in responding to your question is that the

80

CAROLAMPKIN COURT REPORTERS

1 assumption that Ms. Bullock quit smoking in 1994, that  
2 would have placed her, by the year 2001, in the category --  
3 or had she done that and been in the category as of 19- --  
4 as of the year 2001, of quitters of seven years duration.  
5 That's a number -- the number pertaining to that category  
6 of cessation is one that I can look up, but I don't have in  
7 my head.

8 BY MR. PIUZE:

9 Q Do you have it in the room?

10 A I have it in the room.

11 Q Okay. Then look it up, please.

12 (Witness consulting documents.)

13 THE WITNESS: 1994 was the year?

14 BY MR. PIUZE:

15 Q Yes, sir.

16           A     There is no category for seven years of  
17 quitting, specifically, but quitting in 1964 corresponds to  
18 quitting in six to ten years of cessation, and the same  
19 source from which I took the number of 1.4, which I  
20 characterize as approaching the risk of never smokers  
21 represents from six to ten years, a relative risk of 1.0,  
22 which means as calculated within the precision of the  
23 Surgeon General's numbers here, exactly the same as that of  
24 a lifetime, never smoker.

25           Q     No, can't be. It's got to be a mistake. You  
81

CAROLAMPKIN COURT REPORTERS

1     already told me that if she had quit in '66 her risk factor  
2 would have been 1.4. And now we're having her smoke an  
3 additional 28 years? That can't be right.

4           A     It is the number as reported by the Surgeon  
5 General, and it is, like, the 1.4, a number that is  
6 approaching the one, the level of one, of a lifetime never  
7 smoker. If they're within --

8           Q     Can't be. I'm sorry to interrupt.

9                 Ms. Bullock starts smoking cigarettes in 1955  
10 and continuing smoking until 1994. Most of that time, as  
11 you know, she was a multi-pack smoker. And if she quits in  
12 1994, her relative risk factor is going to be the same as  
13 if she'd never smoked?

14                 Is that what you're telling me?

15           MS. WILLIAMS: Mischaracterizing his testimony.

16 THE WITNESS: That's not my testimony. My testimony  
17 is a number from the Surgeon General's report.  
18 BY MR. PIUZE:  
19 Q And I am respectfully suggesting that you're  
20 looking in the wrong place is the reason you're telling me  
21 that. If you gave me a 1.4 before when she quit in 1996,  
22 it is inconceivable you should give me a lower number than  
23 1.4 if she quits in '94. It can't exist in the universe.  
24 This is the sun rises in the east kind of thing.  
25 Can you look again?

82

CAROLAMPKIN COURT REPORTERS

1 A I will. I have looked again, and there is  
2 one -- there is one change I want to make. The number that  
3 I've given you already assumes a low level of the low  
4 category of smoking of 19 or fewer cigarettes per day,  
5 throughout the smoking history. Now, as I testified  
6 previously, I was looking at the same source previously,  
7 and that is the number that comes from the same source.  
8 And if I switch to the category of greater than or equal to  
9 20 cigarettes per day, and it's unclear -- it's unclear,  
10 based on the history that I know of, which category to put  
11 her in -- but for that category the relative risk would be  
12 9.1.  
13 Q Let's forget that category. Let's go to 19  
14 cigarettes or less. I'm not going to budge. I'm going to  
15 give you a chance to change what I see as an irreconcilable

16 set of numbers. If it was always 19 cigarettes or less,  
17 and she always started in 1955, and her relative risk, if  
18 she quit in 1996 was 1.4, and she continued to smoke the  
19 less than 19 cigarettes for an additional 28 years, how  
20 could her relative risk go down?  
21 A I don't -- I know of no reason why it would go  
22 down, and I don't think, based on what I know that it  
23 actually would go down. Between the two scenarios that you  
24 have described, that more smoking would make it go down.  
25 Q Aren't you telling me that someone who smoked

83

CAROLAMPKIN COURT REPORTERS

1 for approximately 40 years, less than 19 cigarettes a day,  
2 and quit in 1994, has a relative risk factor of less than  
3 1.4?  
4 MS. WILLIAMS: Objection. Mischaracterizes his  
5 testimony.  
6 BY MR. PIUZE:  
7 Q Maybe I misheard you.  
8 A I'm not telling you what the relative risk  
9 factor of what any individual is. I was telling you  
10 numbers from the Surgeon General's report on this subject.  
11 Q I know that.  
12 A Okay. Well, that -- I didn't understand your  
13 question as asking whether I was testifying that that is  
14 the reality as opposed to telling you what the Surgeon  
15 General's report says about that category.

16 Q Let's stay with you just telling me what the  
17 Surgeon General's report is telling me.  
18 And please look again. And whether we're  
19 talking Betty Bullock, Sam Smith or statistics, over the  
20 huge number, if the relative risk factor is 1.4 for  
21 someone, whether it's a person or a million people, who  
22 quit in 1966, how can it conceivably be smaller than 1.4,  
23 if all those people with the same smoking history continue  
24 after '66, up until 1994?  
25 MS. WILLIAMS: Objection. Assumes facts not in

84

CAROLAMPKIN COURT REPORTERS

1 evidence.  
2 THE WITNESS: Your question is broad, but how can it  
3 conceivably be? But -- I can try and get you -- us past  
4 this point. I can try can be helpful and give an answer  
5 that is not a correct answer to your question, but intended  
6 to --  
7 BY MR. PIUZE:  
8 Q Move us --  
9 A -- be responsive to your concern.  
10 I am not testifying, and I do not -- I'm not  
11 testifying that her relative risk would have been -- to  
12 begin with, relative risk is a statistical concept, and I  
13 need to start with that caveat, because relative risks and  
14 statistical measures of ratios of incidents like this do  
15 not necessarily govern and pertain to the individual

16 situation of any single individual person, such as  
17 Ms. Bullock. So -- and it's important that you understand  
18 that, and for me to begin with that caveat, so I don't have  
19 to keep qualifying what I have to say further on.

20 The numbers that are reported by the  
21 Surgeon General are based on the methods of calculations.  
22 And the data available for these calculations, in a certain  
23 statistical sense are the best estimates of the rate ratios  
24 in various categories.

25 When you asked me about the 16 or more year

85

CAROLAMPKIN COURT REPORTERS

1 category, I gave you the reported number. When we were  
2 discussing the 16-year number, I gave you the reported  
3 number, which is 1.0. Both of these numbers are  
4 statistical estimates having a sample of people of never  
5 smokers and of smokers in the CPS-II data, or ex former  
6 smokers with a certain duration of cessation. When a  
7 statistician, such as the Surgeon General statistician,  
8 uses a sample of data to calculate a statistical estimate  
9 of some underlying true number, the resulting calculation  
10 has in it a margin of statistical error, of statistical  
11 uncertainty, in the sense that if the world, not the  
12 mechanism that produced the sample, had evolved  
13 differently, and a different cast of persons was drawn into  
14 the sample, but with the same facts about exposure, the  
15 answer would be, in all probability, somewhat different.

16                   So 1.4 is the sample value calculated by the  
17 Surgeon General for the relative risk, but that is not the  
18 true underlying number had a hypothetically vast sample of  
19 all persons who could possibly be gathered into the sample  
20 universe been available for this calculation. So the  
21 interpretation of the numbers that I have been quoting to  
22 you from the Surgeon General's tabulation is -- that  
23 cessation of long duration is associated with a dramatic  
24 reduction in the level of relative risk, compared to that  
25 of continuing smokers. And in the categories of longest

86

CAROLAMPKIN COURT REPORTERS

1       cessation, the level of relative risk is one that  
2       approached one, which is the level of a lifetime never  
3       smoker.  
4                   Now that the pattern of the numbers, or the  
5       progression of the numbers in the table, jiggles up and  
6       down, is not a claim that the Surgeon General is advancing  
7       about the true behavior of, or the true differences in  
8       relative risk between categories of people at different  
9       durations of cessation. These are statistical estimates  
10      with sampling uncertainty in them of the underlying  
11      biological and medical phenomenon that is being described  
12      in these numbers. It is surprising -- it would be  
13      surprising -- indeed I would find it near unbelievable --  
14      if, in reality, barring artifacts of how the sample of  
15      persons in this calculation was really collected, and

16 whether in one case artifacts are the type where one group  
17 comes from hospitals only, and the other came from rural,  
18 it would be a surprising supposition that the true relative  
19 risk, absent any sampling uncertainty, could behave in the  
20 way that I've -- that is reflected in the sample  
21 calculations reported by the Surgeon General. And the  
22 Surgeon General would not -- the Surgeon General's  
23 statistician would not -- I don't know what interpretation  
24 they would apply to this, but a professional statistician,  
25 looking at these numbers, would not stumble over that

87

CAROLAMPKIN COURT REPORTERS

1 apparent surprise in the numbers.  
2 Q What would a professional statistician do?  
3 MS. WILLIAMS: Objection; vague. Overbroad.  
4 THE WITNESS: Uh, I can't characterize entirely  
5 broadly what all professional statisticians would do, but  
6 an example of what a professional statistician might do is,  
7 interpreting myself in my previous rather lengthy answer to  
8 my identify your previous question that is.  
9 BY MR. PIUZE:  
10 Q You've already answered?  
11 A What would a professional statistician do?  
12 Q Yes.  
13 A With respect to interpreting the numbers in  
14 this table and reflecting on the -- on how to interpret the  
15 fact that the calculated relative risk provided by the



16 Surgeon General actually increases in this portion of the  
17 table, when you go from a long to an even longer duration  
18 of cessation, a professional statistician would interpret  
19 that in the way I described in my previous answer.

20 Q Okay. Well, doubt that Ms. Bullock increased  
21 her chance of not getting lung cancer by continuing to  
22 smoke between 1966 and 1994?

23 MS. WILLIAMS: Objection. Argumentative.  
24 Mischaracterizing his testimony.

25 THE WITNESS: I have no reason to believe that.

88

CAROLAMPKIN COURT REPORTERS

1 And indeed it's -- that would be not supported by or  
2 consistent with my previous answer.

3 BY MR. PIUZE:

4 Q So what good are those risk factor tables  
5 you've got if you know that they're demonstrably  
6 inaccurate?

7 MS. WILLIAMS: Objection to form.

8 THE WITNESS: The -- what you characterize as -- I'm  
9 sorry. Your question is what good are they? They are from  
10 the -- as published by the Surgeon General of the  
11 United States, the best estimates available to the authors  
12 of this analyses, based on the CPS-II million person study  
13 of the pattern of decreasing relative risk of lung cancer  
14 associated with consecutive groups of duration of  
15 cessation.

16                   And what they show is a dramatic decline from  
17 the level of relative risk of continuing current smokers  
18 down into the range of long time cessation wherein the  
19 relative risk numbers in the categories of long time  
20 quitters are approaching and in the vicinity of those of  
21 never smokers.  
22 BY MR. PIUZE:  
23           Q     Right. But the risk factor of not so long time  
24 quitters is even closer to never smoking, right?  
25           MS. WILLIAMS: Objection. Mischaracterizes his

89

CAROLAMPKIN COURT REPORTERS

1 testimony.  
2           THE WITNESS: Uh, the calculated -- the  
3 statistically calculated value incorporating the  
4 statistical margin of error are the same type of  
5 projections of how many people would -- the margin of  
6 error, plus or minus something, has a character in this  
7 table that is surprising. And to a -- would be surprising  
8 to one who did not understand that there is a margin of  
9 uncertainty in these numbers.  
10 BY MR. PIUZE:  
11          Q     But is not a surprise to a professional  
12 statistician.  
13                Did Ms. Bullock's odds, statistically speaking,  
14 of getting lung cancer and smoking, increase or decrease  
15 because she continued smoking after 1966 and until 1994?

16 MS. WILLIAMS: Objection; vague.  
17 THE WITNESS: I don't know that as a matter of  
18 medical or scientific fact, but based on interpretation of  
19 the numbers that we have been discussing, it would be  
20 reasonable to conclude, or to think, that her odds  
21 increased as a result of continuing smoking, or at least  
22 that she did not decrease.  
23 BY MR. PIUZE:  
24 Q How much did she increase?  
25 A The --

90

CAROLAMPKIN COURT REPORTERS

1 MS. WILLIAMS: Objection; vague.  
2 THE WITNESS: The relative risk that we've discussed  
3 between -- from assuming quitting of the group -- of the  
4 group of quitters that quit in 1994, that would be the  
5 seven-year quitting cessation group, as compared to current  
6 smokers in this calculation, that distinction makes the  
7 difference between relative risk that is approaching one --  
8 a number that one can't pin down precisely as 1.5 or 1.4 or  
9 1.0, but a number that is approaching one, on the one hand,  
10 compared to a relative risk of 7.3 for continuing smokers  
11 of 19 or more cigarettes per day, female smokers of 19  
12 cigarettes per day.  
13 BY MR. PIUZE:  
14 Q I don't believe you answered my question.  
15 A Then I didn't understand the question. I was

16 trying to --  
17 MR. PIUZE: Let's hear the answer.  
18 (Whereupon, the record was read as follows:  
19 "THE WITNESS: The relative risk that we've  
20 discussed between -- from assuming quitting of  
21 the group -- of the group of quitters that quit in  
22 1994, that would be the seven-year quitting cessation  
23 group, as compared to current smokers in this  
24 calculation --")  
25 MR. PIUZE: The question is --

91

CAROLAMPKIN COURT REPORTERS

1 THE WITNESS: I want to hear the whole answer, if  
2 that's all right.  
3 (Whereupon, the record was read as follows:  
4 "THE WITNESS: The relative risk that we've  
5 discussed between from assuming quitting of the  
6 group -- of the group of quitters that quit in  
7 1994, that would be the seven year quitting  
8 cessation group as compared to current smokers  
9 in this calculation. That distinction makes the  
10 difference between relative risk that is  
11 approaching one -- a number that one can't pin  
12 down precisely as 1.5 or 1.4 or 1.0, but a  
13 number that is approaching one, on the  
14 one hand, compared to a relative risk of 7.3 for  
15 continuing smokers of 19 or more cigarettes per

16 day, female smokers of 19 cigarettes per day.")  
17 MR. PIUZE: You didn't answer the question.  
18 THE WITNESS: I understand.  
19 And I had understood the question to be  
20 referring to continuing smokers compared to the quitting  
21 group. And I now understand what it is.  
22 Either one of these quitting durations  
23 starting -- the quitting duration starting in 19- -- with  
24 cessation in 1966 or the quitting cessation group with  
25 cessation as of 1994, according to these numbers, according

92

CAROLAMPKIN COURT REPORTERS

1 to the level of discrimination that is possible in these  
2 numbers, would have a relative risk that is approaching  
3 one, but it would be reasonable from the trend in these  
4 numbers to suppose that it -- that continuing smoking  
5 beyond 1966 to 1994 caused that relative risk not to  
6 decrease at any rate and possibly to increase, but it is  
7 not possible to quantify that increase from the numbers  
8 published here.  
9 BY MR. PIUZE:  
10 Q Okay. Let's say that we want to compare the  
11 statistical average for Ms. Bullock stopping in '66, and  
12 that statistical average, she would have smoked 19 or less  
13 cigarettes per day, and we now want to compare that to the  
14 statistical average for Ms. Bullock to who increased to  
15 approximately two packs per day and then quit in 1994, can

16 you tell me how much her odds of getting lung cancer  
17 increased statistically?  
18 MS. WILLIAMS: Objection to the hypothetical.  
19 THE WITNESS: Based on the numbers in front of me  
20 and the level of -- the relatively gross categories in  
21 these numbers, I can give you no precise quantification of  
22 the effect of comparing the -- a 1966 quitting group to a  
23 1994 quitting group.  
24 BY MR. PIUZE:  
25 Q Why?

93

CAROLAMPKIN COURT REPORTERS

1 A Because the categories into which numbers have  
2 been divided in the Surgeon General's tabulations simply do  
3 not reflect the premise of the two groups that you are  
4 asking me to compare.  
5 Q Okay. Well, can you think of any way to give  
6 me an answer?  
7 MS. WILLIAMS: Objection to form.  
8 THE WITNESS: Not from the materials in front of  
9 me.  
10 BY MR. PIUZE:  
11 Q Excellent. What about rather than compare --  
12 A Or excuse me. What I can say is that for a  
13 heavily smoking group, the six- to ten-year quitting group,  
14 has a relative risk of 9.1 compared to the 16 or more year  
15 group which has a relative risk of 2.6. And so that would

16 be an increase in the relative risk of 6.5 between those  
17 two rather broad categories, compared to the relative risk  
18 of 16.3, which is the value for continuing smokers  
19 throughout the entire period. To place in context, the 6.5  
20 increment that was the group of heavy, characterized as 20  
21 or more cigarettes per day, and I understand that does not  
22 characterize her early smoking history.  
23 Q We're almost done. What's in the black  
24 binder?  
25 A I have several.

94

CAROLAMPKIN COURT REPORTERS

1 Q What's in the one that's in front of you?  
2 A The one in front of me contains a collection of  
3 38 articles or sections of articles. An example would be  
4 the Surgeon General's report of 1990, which is Item  
5 Number 6 from the binder. And when I say sections of  
6 articles, what I mean to convey is that the complete report  
7 of 1990 report is a rather larger document than this  
8 packet, but what I have here is the chapters that pertain  
9 to cessation and lung cancer or mortality. I don't have  
10 the entire report here.  
11 Q Everything in this black binder is the 1990  
12 Surgeon General --  
13 A No. Tab 9 is the 1990 Surgeon General report.  
14 MR. PIUZE: Do you have the list of the documents  
15 that he's reviewed?

16 MS. WILLIAMS: I do, actually. This is what was  
17 Fed Ex'd to your office. The entire collection was  
18 Fed Ex'd from my office. The list was produced previously,  
19 as by my office.

20 MS. WILLIAMS: And the Fed Ex package includes these  
21 from the Surgeon General's report.

22 MR. PIUZE: Here's a hypothetical question.

23 Q Ready? Set?

24 A Yes.

25 Q Male, 57, started at 13 and ended at 36, about  
95

CAROLAMPKIN COURT REPORTERS

1 50 pack years, what are the relative risks now, 22 years  
2 after quitting, for lung cancer?

3 A I thought you said 57 quit at 36. Wouldn't  
4 that be 21?

5 Q You have to give me a little room. It would be  
6 21.

7 MS. WILLIAMS: Objection to form.

8 THE WITNESS: 50 pack years, in the age range of 13  
9 to 36, suggests that at least during some of that period  
10 there was a two a more pack a day rate of smoking, and so I  
11 would take it on that interpretation that the intensity  
12 category for this hypothetical male, age 57, would be in  
13 the greater than or equal to 21 cigarettes per day group.  
14 And we are talking about 21 years of cessation. And the  
15 closest that I can get from the Surgeon General's number to



16 21 years of cessation is greater than or equal to 16 years  
17 of cessation. The additional years would help, but I have  
18 no way of quantifying that statistical estimate. And  
19 understanding that it incorporates a margin of statistical  
20 error, because it is calculated from that sample, is a  
21 relative risk of 5.5, and that is from Table 7 of Chapter 4  
22 of the report of the Surgeon General of the United States  
23 of 1990.

24 BY MR. PIUZE:

25 Q 5.5 meaning five times more likely to get lung  
96

CAROLAMPKIN COURT REPORTERS

1 cancer than a never smoker?

2 A That's the interpretation.

3 Q Okay. So it's one of the reasons I like  
4 Philip Morris so much.

5 MS. WILLIAMS: Let me interject here. This  
6 interjection is these exhibits here that we produced today,  
7 these are in the Fed Ex package, but some are duplicated, I  
8 believe, towards the end here (indicating).

9 (Brief recess.)

10 THE WITNESS: That's a copy of my current C.V.,  
11 Exhibit 1.

12 BY MR. PIUZE:

13 Q Now, what have you got?

14 A There is a collection of documents and  
15 articles, one of which is tabbed correspondence to --

16 Tab 9, that I have looked at.  
17 Q Are these things listed?  
18 A One to one correspondence between this packet  
19 and this list (indicating).  
20 Q This list, as you just so eloquently stated is  
21 Exhibit --  
22 MS. WILLIAMS: I think with exception to items five  
23 and six on this list. I'm just telling you what we're  
24 producing.  
25 THE WITNESS: Let me clarify. That's one to one

97

CAROLAMPKIN COURT REPORTERS

1 correspondence, but as I testified previously, not all of  
2 the documents in this package are complete copies of the  
3 originals. For instance, the Surgeon General's 1990  
4 report, this is not the complete report, but what is in my  
5 binder is what is in this packet.  
6 MR. PIUZE: Let's have the packet.  
7 The index of articles and the articles  
8 themselves are three.  
9 (Plaintiff's Exhibit 3 was marked for  
10 identification by the Certified Shorthand  
11 Reporter and retained by counsel.)  
12 BY MR. PIUZE:  
13 Q What else do you have?  
14 A I have the -- in my binder pages I have a tab  
15 that is the list that you have identified as Exhibit 3. I

16 have a copy in my binder of the CPS-II questionnaire that  
17 was used for gathering CPS-II data.  
18 Q May I have that?  
19 A It's one of the items on the list. You may  
20 have it from the binder, or you may have it from the packet  
21 in front of you.  
22 Q It's okay.  
23 A I have pages in my binder corresponding to the  
24 exhibits, the unmarked exhibits that you have handed me,  
25 unmarked in the sense that they do not have an exhibit

98

CAROLAMPKIN COURT REPORTERS

1 number for this deposition.  
2 Q Yes, they do. They have Exhibit Number 4 for  
3 this deposition. Let's put a 4 on this group of -- what do  
4 you call this here?  
5 A Computer printouts.  
6 MR. PIUZE: The computer printouts are now Number 4.  
7 (Plaintiff's Exhibit 4 was marked for  
8 identification by the Certified Shorthand  
9 Reporter and retained by counsel.)  
10 BY MR. PIUZE:  
11 Q Looks like you used them as an exhibit  
12 somewhere else.  
13 A I have not used these in any other case.  
14 MS. WILLIAMS: Those are exhibits in this case.  
15 MR. PIUZE: So the Number 11236 corresponds to the

16 trial Exhibit Number for this document?  
17 MS. WILLIAMS: Yes.  
18 MR. PIUZE: Thank you very much.  
19 Q What are these computer runs supposed to prove,  
20 if anything?  
21 A They demonstrate or illustrate a number of  
22 points. And the best way to go to what they illustrate is  
23 to look at a particular page.  
24 Q Okay. Look at a page.  
25 A And I'm looking at the first of the pages in

99

CAROLAMPKIN COURT REPORTERS

1 this set.  
2 Q What does it prove or demonstrate?  
3 A That smokers and non-smokers in CPS-II are  
4 different on dimensions of behavior or choices or risk  
5 factors that were also measured in CPS-II, other than  
6 smoking.  
7 Q For instance?  
8 A For instance, diet and exercise and  
9 participation in social -- in a social network, be that  
10 emotional or participation in church or in clubs or other  
11 kinds of social participation.  
12 MR. PIUZE: Okay. I want to confer with counsel  
13 here a second.  
14 (Counsel conferring off the record.)  
15 BY MR. PIUZE:

16 Q This stuff sounds awful complicated.  
17 What else do you have?  
18 A I have the other half of the packet of  
19 articles, so this is just my version of the rest of that  
20 (indicating). I have some case specific documents that I  
21 received.  
22 Q What?  
23 A I believe that I listed all of these to you  
24 previously. There is a complaint; there is a designation  
25 of expert witnesses; some depositions. These are the

100

CAROLAMPKIN COURT REPORTERS

1 depositions transcripts that I identified previously when  
2 we talked. There is a Response to Interrogatories.  
3 Q Thank you.  
4 And what else? Anything?  
5 A Well, I will go through the other tabs of my  
6 binder, which I have identified each of the tabs of the  
7 binders, then I have some materials in the front cover. I  
8 have a notation -- this is -- I have copies here of the  
9 invoices which I produced to counsel and counsel handed you  
10 at the table here, but I have some -- I have a notation  
11 about the invoice for March and April, and I am informed  
12 that it has been faxed. Per our conversation earlier in  
13 this deposition, it has been faxed to you.  
14 MR. PIUZE: Excuse me.  
15 (Brief interruption.)

16 MR. PIUZE: Came right off the machine  
17 simultaneously to you mentioning it.  
18 THE WITNESS: This says it came at 9:44 this  
19 morning.  
20 MR. PIUZE: Don't take that to the bank.  
21 THE WITNESS: This, I believe, was addressed to you,  
22 Ms. Williams.  
23 Should I hand it to you?  
24 MR. PIUZE: You could just give to me.  
25 MS. WILLIAMS: Okay.

101

CAROLAMPKIN COURT REPORTERS

1 BY MR. PIUZE:  
2 Q Okay. So what is it?  
3 A This is the invoice for the purpose of March,  
4 the Wecker Associates invoice in connection with the  
5 Bullock case for the period of March 1st through  
6 April 30th, 2002.  
7 Q What has happened since April? Where is your  
8 bill for April and May?  
9 A This bill is for April -- March through April,  
10 April 30th.  
11 Q All right.  
12 A We're in May, so there is no invoice for May.  
13 Q How much time have you spent in May?  
14 A Before this week I had spent, in May, six and a  
15 half hours. And I have not tabulated what I spent in the

16 last several days, but it has been substantial. A  
17 reasonable estimate is I've spent an additional 20 hours in  
18 the last several days.  
19 Q Do you know what that means?  
20 A I don't understand the question.  
21 Q Okay. I think it means about 9900 bucks.  
22 I've taken off the fax invoice and stapled them  
23 in to Exhibit 2.  
24 What else do you have, sir?  
25 A I've gone through everything I have. Nothing

102

CAROLAMPKIN COURT REPORTERS

1 else.  
2 Q What about this (indicating)?  
3 A That's part of the packet that I identified  
4 previously from Tab 3 of my binder.  
5 Q Is this document in here?  
6 A No, no. It's -- when I transmitted it, or  
7 caused it to be transmitted, it was part of a document that  
8 you have marked as exhibit -- the computer printout  
9 document.  
10 Q Actually, what I did, sir, is I separated out  
11 the remainder, so let's make the remainder here Number 5.  
12 And it starts talking about risks of everyday life and  
13 apparently it has a trial exhibit number of 11245.  
14 Why don't you tell me why the risks of everyday  
15 life are here.

16 (Plaintiff's Exhibit 5 was marked for  
17 identification by the Certified Shorthand  
18 Reporter and is attached hereto.)  
19 THE WITNESS: I have, on occasion, been asked in  
20 consultation with counsel on matters like this. In other  
21 words, pertaining to risk attributions and risk analyses,  
22 how I would explain to a jury or a judge the interpretation  
23 of a relative risk number, such as 2 or 4 or 22, and place  
24 it in the context of risks that people encounter in  
25 everyday life, to give it some meaning or to associate it

103

CAROLAMPKIN COURT REPORTERS

1 with a meaning that perhaps is easier to grasp than the  
2 abstract formulations of epidemiological calculations. I  
3 don't recall that -- I have no recollection that anybody  
4 asked me that specifically in this case, but that's the  
5 context in which I have developed thoughts that are  
6 documented here.

7 The front page is the page that I would use to  
8 explain -- to provide that explanation. All of the other  
9 pages are simply the sources to numbers that go on to the  
10 front page.

11 BY MR. PIUZE:

12 Q With that in mind, and my comment is, that  
13 would be a good idea?

14 MS. WILLIAMS: Objection; vague.

15 MR. PIUZE: Vague?



16 MS. WILLIAMS: I don't understand what you're  
17 asking.  
18 MR. PIUZE: That would be a good idea, to use the  
19 first page and not the other pages.  
20 Q Explain Page 1 of Exhibit 5, please.  
21 A The Page 1 lists a number of activities that  
22 are not -- that are not -- that do not have a character of  
23 epidemiological calculations. They're familiar, every day  
24 activities that many people see or engage in, such as  
25 riding a motorcycle or seeing someone riding a motorcycle

104

CAROLAMPKIN COURT REPORTERS

1 or taking a trip in a passenger car or being on a general  
2 aviation airplane or being a passenger on a carrier flight  
3 or corporate airplane or private pilot flying the  
4 airplane. That would be general aviation as a mode of  
5 transportation. Going from Point A to Point B in a  
6 passenger car. There are risks involved with riding a  
7 motorcycle on a trip, as opposed to riding in a passenger  
8 car. There are risks. And the question is what is the  
9 risk comparison of those two to activities -- how would one  
10 describe that in terms of the concept of relative risk. So  
11 I've already described two of the examples. The third  
12 example has to do with recreational swimming compared to  
13 recreational scuba diving, and the relative risks are shown  
14 in the panel of numbers at the bottom of that page. The  
15 numbers higher up on the page are themselves inputs to the

16 panel of three numbers at the bottom of the page, and those  
17 inputs are drawn, as I've explained, from other pages in  
18 this packet.

19 This summary is that of a motorcycle trip  
20 compared to a passenger car trip, on average, in the  
21 conditions -- road conditions of the United States, of  
22 course. This would be different in Afghanistan or  
23 Indonesia, but on average, in the United States, that  
24 reflects the relative risk of 31.4 as calculated.

25 Q So what does that mean, you've got 31 times the

105

CAROLAMPKIN COURT REPORTERS

1 chance of getting in an accident?

2 A That's right. This is -- those are fatality  
3 risks, 31 times the risks of being killed.

4 Q What if you go fast to avoid danger?

5 A In any individual instance, I could get a  
6 deviation from these numbers. These are averages of  
7 motorcycle riding, in the United States, and it's not  
8 always going fast to get out of danger. Sometimes it is  
9 something else. On average, for motorcycle riding and  
10 taking car rides in the United States, the relative risks  
11 of fatality taking motorcycle versus passenger car is about  
12 31.

13 General aviation versus passenger car, relative  
14 risk is about 19.

15 Q You got 19 times the chance of getting killed

16 in the car as in a small plane?  
17 A The other way around.  
18 Q That's too bad. Should I sell my motorcycle  
19 and my plane?  
20 A I would need to know more than I know to advise  
21 you on that.  
22 The scuba diving example --  
23 Q I have to get rid of my scuba diving gear,  
24 too?  
25 A Compared to recreational swimming along the

106

CAROLAMPKIN COURT REPORTERS

1 surface, it has a relative risk about 6 -- 5.7.  
2 Q Have you told me the opinions you intend to  
3 give at this trial?  
4 MS. WILLIAMS: Objection; vague. Overbroad.  
5 THE WITNESS: I don't think -- I can't think of  
6 anything I might be asked to testify at trial that hasn't  
7 come up somewhere in the scope of what we've discussed  
8 here. There's room for different wording of something, but  
9 I can -- there is nothing that I can think of.  
10 BY MR. PIUZE:  
11 Q Excellent. Of course, you're assuming that I  
12 was awake now.  
13 A I'm making that assumption.  
14 Q What's this?  
15 A You were standing for much of the time.

16 Q Yeah, but I won't go there.  
17 What is this?  
18 A That's an index, a list of --  
19 Q Exhibits?  
20 A -- exhibits.  
21 The first of these, for instance is the first  
22 computer printout page that we talked about, the one that  
23 compares smokers to non-smokers.  
24 MR. PIUZE: Ms. Williams, can you give me a clue?  
25 MS. WILLIAMS: That's an index of Exhibits 4 and 5,

107

CAROLAMPKIN COURT REPORTERS

1 for the purposes of the deposition, which you lumped  
2 together.  
3 MR. PIUZE: Well, if this is an index, this is a  
4 combination of 4 and 5. Should we make this Exhibit 4 and  
5 a half? Let's make it 6.  
6 (Plaintiff's Exhibit 6 was marked for  
7 identification by the Certified Shorthand  
8 Reporter and retained by counsel.)  
9 MR. PIUZE: I have no further questions.  
10 Off the record.  
11 (Discussion held off the record.)  
12 MR. PIUZE: Let's stipulate that the court reporter  
13 is relieved of her obligations under the Code of Civil  
14 Procedure. If she'll send the original of this deposition  
15 to the witness' office, I agree that the witness can sign

16 it under penalty of perjury at a time and place of his  
17 choosing, as long as I am advised of additions, changes or  
18 corrections within 30 days of his receipt of the original,  
19 or 24 hours before his testimony, whatever occurs first.  
20 Defense gets to keep the original.

21 MS. WILLIAMS: So stipulated.  
22 (Deposition was concluded at 1:05 P.M.)  
23  
24  
25

108

CAROLAMPKIN COURT REPORTERS

1  
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4  
5 STATE OF CALIFORNIA )  
6 ) ss.  
7 COUNTY OF )  
8

9 I, the undersigned, say I have read the foregoing  
10 deposition and hereby declare under penalty of perjury the  
11 foregoing is true and correct.

12 Executed this day of , 2002, at  
13 , California.  
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D E C L A R A N T

109

CAROLAMPKIN COURT REPORTERS

1     STATE OF CALIFORNIA     )  
   ) ss.  
2     COUNTY OF VENTURA     )  
3  
4         I, FRANCES M. GARRITY, Certified Shorthand  
5     Reporter No. 8934 in the State of California, duly  
6     empowered to administer oaths, certify:  
7         That prior to being examined, the witness named in  
8     the foregoing deposition was by me duly sworn to testify  
9     the truth, the whole truth, and nothing but the truth;  
10        That said deposition was taken before me at the time  
11     and place therein set forth and was taken down by me in  
12     shorthand and thereafter transcribed under my direction  
13     and supervision, and I hereby certify that the foregoing

14 deposition is a full, true, and correct transcript of my  
15 shorthand notes so taken.

16 I further certify that I am neither counsel for nor  
17 related to any party to said action nor in anywise  
18 interested in the outcome thereof.

19 In witness whereof, I have hereunto subscribed my  
20 name this day of , 2002.

21

22

23

FRANCES M. GARRITY  
Certified Shorthand Reporter No. 8934

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110

CAROLAMPKIN COURT REPORTERS